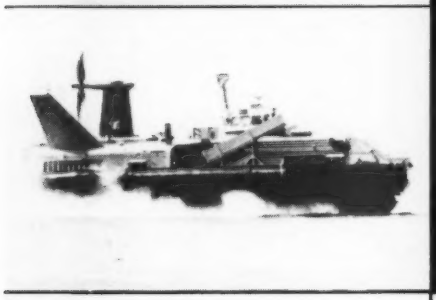
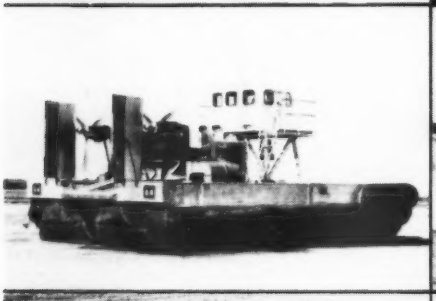
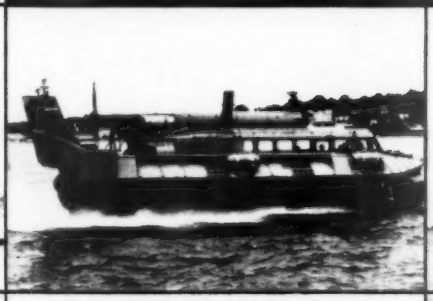
Trade and Industry

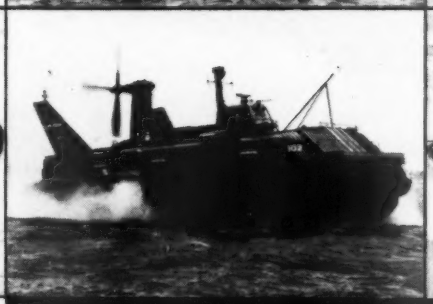
1 October 1976 35p

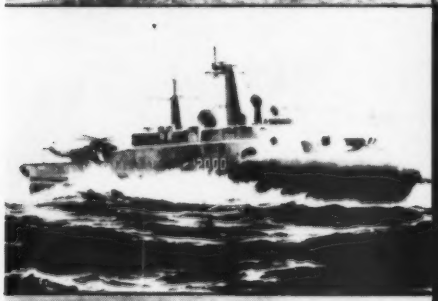


British Hovercraft Corporation— world leaders in skirt technology and production









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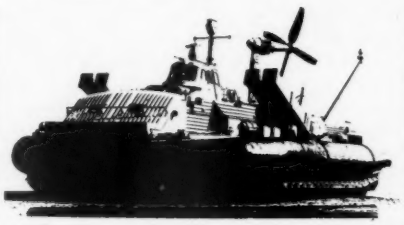
Trade and Industry

1 October 1976

News from the Departments of Industry·Trade·Prices & Consumer Protection



The hovercraft industry is one of those which the British government has aided from time to time since its inception. The state of the hovercraft art is reviewed in this issue, beginning on page 18.

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The Editor regrets that due to a continuing industrial dispute within the printing industry, some material intended for this issue has been omitted or held over. Deliveries of some copies may also be delayed.

Home news

Chancellor announces approach to IMF

Denis Healey, Chancellor of the Exchequer, announced on 29 September that he had informed the managing director of the International Monetary Fund of his intention to apply for a standby which would make available the UK's remaining credit tranches in the fund.

The UK drew the first credit tranche of SDR 700 million in May under the standby arrangement agreed on 31 December. The remaining three credit tranches amount to SDR 2,100 million and there is also the 45 per cent temporary increase in quotas agreed at the January interim committee meeting in Jamaica which, applying also the first credit tranche, add a further SDR 1,260 million.

The total of SDR 3,360 million is worth some $3,900 million, or £2,300 million.

Price Commission reports on prices of small packs

In a report* published on 30 September, the Price Commission explains why prices for goods in small tins and packets are proportionately higher than those for larger sizes. The commission found that it almost always costs more to make and market a product in small sizes.

*The Unit Prices of Small Packs, Price Commission Report No 21, HMSO 60p

The study identifies in detail reasons why small packs cost more than popular sizes. In general there is no evidence that unreasonable profits are taken.

The commission analysed 16 products – from breakfast cereal and canned soup to gloss and emulsion paint. Comparisons of costs, prices and margins for smallest, largest and most popular sizes of each product are set out in the report.

These comparisons show that the difference in unit prices between the smallest pack and the most popular size was commonly in the range of 10 per cent to 20 per cent; but it could range from under 10 per cent to as much as 79 per cent.

The report concludes, 'Anyone who buys small sizes must usually be at a price disadvantage. If the small size has other advantages (eg convenience) this may not greatly matter. But if a person is limited by his pocket to buying in the smallest sizes he undoubtedly comes off worse than those who are able to purchase popular or large sizes.'

The commission suggests that some relief would be brought about if:

1 prices of smallest sizes were rounded down to the nearest unit of currency at least as frequently as they are rounded up;
2 manufacturers could avoid undue loading of margin on to the smallest size; any disadvantage in manufacturer's prices tends to be compounded when the distributor adds his margin;
3 special offers were more frequently made on the smallest sizes.
4 more information were given either on packs or shop displays, about the relative unit prices of various sizes;
5 more information were given on food packs about the likely life of their contents after they have been opened.

Helping the police with their inquiries

This electronic 'touch map', mounted on the dashboard of a police car, and a keyboard coding system are part of new automatic data transmission equipment on operational trials with Britain's police. The map is used for the instant reporting of a precise location. Area maps are slotted into the frame and a position is indicated simply by touching the point on the map. The touched position is detected electronically. The system, known as Made (mobile automatic data experiment), includes an alpha-numeric keyboard and display, mobile printer, numeric code display keyboard unit. Routine messages can be coded and sent as combinations of numbers or letters with maximum security. Messages are acknowledged automatically and message codes transmitted by the control room are displayed on the vehicle unit. A red 'panic button' is included in the keys of the police car's digital terminal to alert control immediately in an emergency. Made is being installed for evaluation in 57 specially equipped police vehicles. It is being developed by GEC-Marconi Electronics Ltd, Chelmsford.

Official appointments

Advisory committee for new script-writing fund, Edmund Dell, Secretary of State for Trade, has made the following appointments to the advisory committee which will consider applications for loans from the National Film Development Fund:

Clive Donner,	Ken Maidment
Robert Hamilton	David Puttnam
Michael Klinger	Rex Pyke
Jesse Lasky	Lord Willis

Members have been appointed for the period up to and including 31 July 1977, with the possibility of re-appointment for one year.

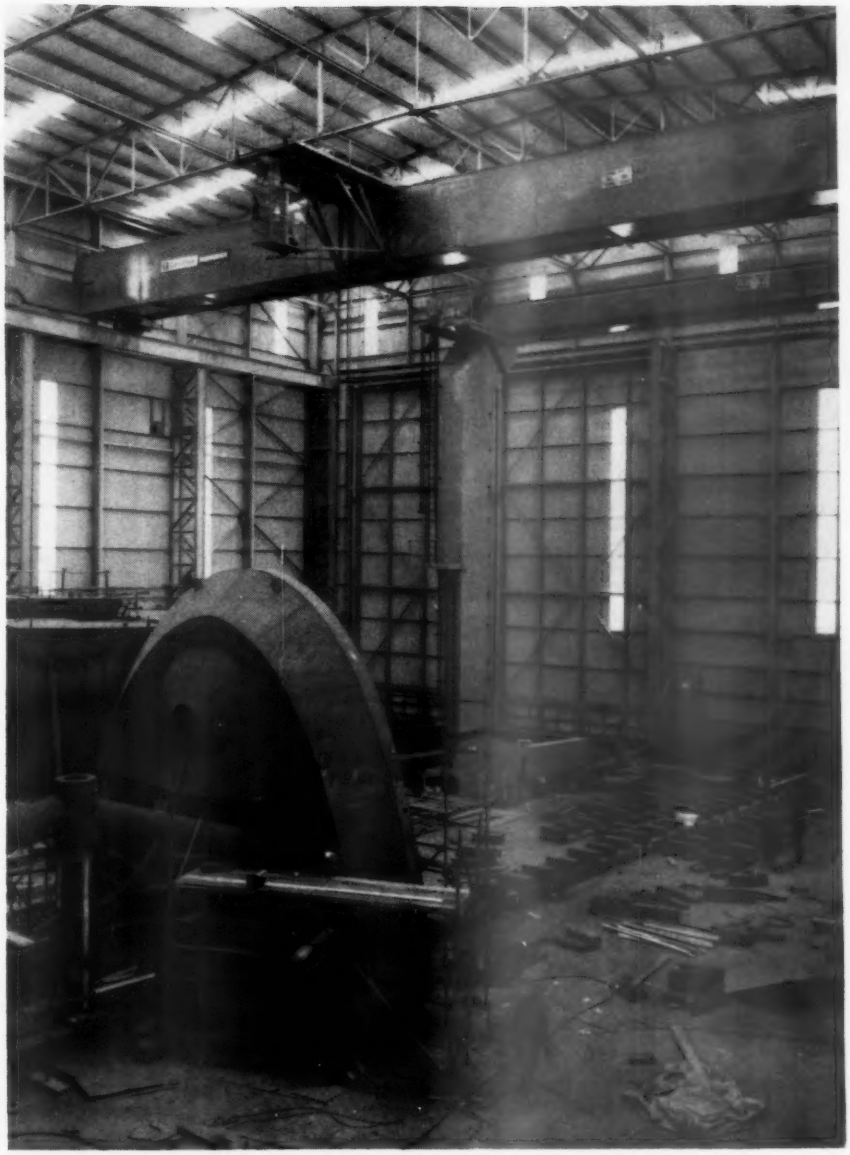
Gas consumers' council appointments Roy Hattersley, Secretary of State for Prices and Consumer Protection, has made the following appointments.

Mr A. J. Adam to be a member of the National Gas Consumers' Council until 30 June 1979.

Mrs M. Roy to be a member of the Scottish Gas Consumers' Council until 31 May 1979.

Mrs G. Dimson, Mr K. Gould, Councillor P. H. Herbert, Mrs I. M. Sharp, to be members of the North Thames Gas Consumers' Council until 30 April 1979.

Electricity consultative councils Councillor P. H. Hanks to be a member of the East Midlands Electricity Consultative Council until 30 November 1978.



At the recently commissioned fabrication hall of Ailsa Shipbuilding Co Ltd, Troon, two Monobox cranes by J. H. Carruthers and Co Ltd assist the indoor construction of ships. Photo shows the stern unit of the tug *Strongbow* in the foreground with the hull behind. Keel blocks for the next ship are already laid below the cranes.

New BEC vocational courses – for business and public administration

Three businessmen and a local authority chief executive have been chosen by the Business Education Council to head the boards which are to be set up to devise and validate BEC's new non-degree vocational education courses for business and public administration. The courses will be introduced from September 1978.

The four board chairmen: Stanley Prior, until recently general manager and regional executive director of the National Westminster Bank Ltd, who will chair the financial sector studies board; Peter Fenwick, managing director of Fenwicks of Bond Street, London, who will chair the distribution studies board, Clifford Smith, chief executive of Suffolk County Council, who will chair the public administration and public sector studies board; and Claude Birch, a former director of GKN and former chairman of several GKN subsidiaries, who will chair the business studies board.

The courses devised by the four boards will lead to the new BEC General, National and Higher National Certificates and Diplomas. The three levels of courses are planned to meet the business education needs of school-leavers and young workers from those with few if any 'O' levels or CSEs to those who leave school at 18 with 'A' levels.

English law extended to newly designated areas of Continental Shelf

The provisions of English law are extended to recently designated areas of the UK Continental Shelf by an Order in Council laid before Parliament and published on 23 September.

The order* is an administrative sequel to the designation order made on 23 July which designated three further areas of the UK Continental Shelf. One area is situated south and south west of Cornwall, and two in the English Channel.

The purposes of the present jurisdiction Order are:

1 to declare that English law is to be used for the determination of questions arising out of acts or omissions taking place in the areas designated in July and to confer jurisdiction on appropriate courts.
2 to bring certain installations in these areas within the scope of the Wireless Telegraphy Act 1949.
3 to bring these installations within the scope of the Radioactive Substances Act 1960.

* The Continental Shelf (Jurisdiction) (Amendment) Order 1976 (SI 1976/1517). Available from HMSO and government bookshops, price 8p.

Cramlington advance factory occupied

Plastilux Ltd have taken occupation of a 1,350m² (15,000 sq ft) advance factory, built by the English Industrial Estates Corporation, on the Nelson Industrial Estate, Cramlington.

Plastilux Ltd, who manufacture plastic rooflights under the brand name Securilite, have been operating for some time in small premises in Blyth but a substantial increase in demand for their products has brought an urgent need for additional production space.

The company expects to employ about 60 people in their new factory as production increases over the next three years.

Engineering company takes Bishop Auckland advance factory

EBAC Ltd have taken occupation of an advance factory of about 900m² (10,000 sq ft) built by the English Industrial Estates Corporation on the Greenfields Industrial Estate, Bishop Auckland, County Durham.

EBAC Ltd, who are engaged in general engineering and the manufacture of a range of air conditioning equipment, have been operating in the Bishop Auckland area for about three years and require the premises to expand production.

When fully operational in the new factory the company expect to employ 46 people.

Industry Act assistance: interest rates increased

The maximum rate of interest relief grant and interest rates for loans under Section 7 of the Industry Act 1972 are increased with effect from 27 September.

The rate of interest relief grant available in those cases where it would be appropriate to allow the equivalent of an interest free period on a Department of Industry loan – but where firms obtain their finance from other sources – is being increased from 13 per cent to 13½ per cent for each interest free year.

The 'concessionary' rate of interest on loans for employment – creating projects (Category A) is increased from 10 per cent to 10½ per cent. The 'broadly commercial' rate of interest on loans for modernisation projects not providing additional employment (Category B) is increased from 13 per cent to 13½ per cent.

Davy-Loewy, manufacturers for the steel and non-ferrous forming industries, has just commissioned the latest UK rod mill for the British Steel Corporation, at its Scunthorpe works. The total project has a value of approximately £9.5 million out of a total investment by BSC of some £30 million. This considerable contract has involved all divisions of Davy-Loewy in Sheffield, together with the Davy Roll Company of Sheffield and Davy Water Engineering, the effluent and water treatment company of Davy, based in London. Picture is of an overall view of the mill showing finishing rod leaving laying heads being cooled on the Stelmor conveyors before entering the re-forming tubs.

More advance factories in Sunderland . . .

Two more advance factories are to be built for the Department of Industry on the Leechmere Industrial Estate, Sunderland, Tyne and Wear. One of these is a unit of about 1,350m² (15,000 sq ft) and the other a terrace unit block of about 900m² (10,000 sq ft) comprising two units of 450m² (5,000 sq ft) each.

Contracts worth about £224,000 have been awarded to Brims and Co Ltd of Walker, Newcastle upon Tyne. Architects are Ronald Chipchase and Partners of Gateshead and quantity surveyors are Wearmouth and Newbigin of Newcastle upon Tyne.

The premises should be ready for occupation in April 1977. Inquiries regarding purchase or lease should be made to: Regional director, Department of Industry, Northern Region, Wellbar House, Gallowgate, Newcastle upon Tyne NE1 4IR, tel. Newcastle (0632) 27575.

. . . Speke . . .

Work has started on another advance factory of about 1,350m² (15,000 sq ft) for the Department of Industry at Speke Hall Road, Speke, Merseyside.

A contract worth about £146,000 has been awarded to Sir Alfred McAlpine and Son (Northern) Ltd of Wirrall. Architects are Associated Design Consultants and quantity surveyors are the Youdan Briggs Partnership, both of Liverpool.

The premises should be ready for occupation by July 1977.

This is the fifth factory to be built on this new site where two units of 900m² (10,000 sq ft), one of 1,350m² (15,000 sq ft) and one of 2,250m² (25,000 sq ft) are already under construction.

Inquiries regarding purchase or lease should be made to Mr P. M. Innes, Department of Industry, North West Region, Sunley Building, Piccadilly Plaza, Manchester M1 4BA, tel. 061-236 2171 ext. 646.

. . . and Bradford

Work will soon start on three advance factories for the Department of Industry on a new site in Canal Road, Bradford. One of these is a block of six terrace units totalling about 1,350m² (15,000 sq ft) and the other two factories are of 450m² (5,000 sq ft) each, a total area to be built of 2,250m² (25,000 sq ft).

A contract worth about £320,000 which includes site development costs, has been awarded to Searson-Mallinson Ltd of Huddersfield. Architects are Abbey and Hanson Rowe and Partners of Huddersfield and the quantity surveyors are Turner and Townsend of Leeds. The premises should be ready next April. These are the first government factories to be built in the Bradford area.

Inquiries regarding purchase or lease should be made to: Regional director, Department of Industry, Yorkshire and Humberside Region, Priestley House, Park Row, Leeds, tel. Leeds (0532) 443171.

Ford to invest £10m in expansion of Belfast plant

The Ford Motor Company has announced a £10 million expansion of its plant at Belfast which will provide 400 additional jobs. The news has been described by Roy Mason, the new Secretary of State for Northern Ireland, as 'a tremendous economic boost at the best possible time'.

The factory, which at present employs 1,250 workers producing 5,000 carburettors and distributors a day for Ford passenger cars, will be extended to increase production floor space by 45,000 sq ft and the installation of new equipment is planned to start in June 1977. The recruitment of the additional workers will begin in April 1978 and the project is scheduled for completion by the end of 1978.

John McDougall, chairman of Ford of Europe Incorporated, said the Belfast expansion would give Ford the carburettor and distributor capacity necessary to meet the anticipated increase in car sales during the 1980s. It would also enable the company to take advantage of new carburettor design technology which is being developed to meet the twin needs of better fuel economy and emission control.

Last year Ford of Europe announced an investment of £2 million at the Finaghy plant for the production of carburettors and distributors for the company's new Fiesta mini car which will be launched on the British market in January 1977, and as a result 150 new jobs have already been created.

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'Modest rate of recovery' for civil aviation last year

In the financial year 1975-76 British airlines and air travel organisers enjoyed a modest rate of recovery after the setbacks of the previous year, says the Civil Aviation Authority in its annual report* published 23 September. Although growth in passenger traffic was small, the most efficient enterprises were able to consolidate and improve their financial basis. The best results were experienced in charter services.

During this period the effects of the government's requirement that the authority should aim to recover its costs – reconfirmed by the new policy guidance of February 1976 – began to be felt more acutely by the industries who have to pay for the authority's services. Concurrently the authority reviewed all its functions to reassess the necessity for them and to see where economies could best be made and concluded that it should be possible to reduce its staff by 7 per cent by the end of 1976.

Finance

The CAA's income in this financial year increased by 47 per cent, while its expenditure increased by 33 per cent. However, because of inflation, the shortfall between them increased by 24 per cent to £53.3 million. Of the total amount £40 million was due to losses on those services over which the authority has no direct control in fixing charges, ie £37.5 million on en route navigation services and £2.1 million on running the Scottish Highlands and Islands airports.

In the areas where the authority has direct financial control the authority has continued to make good progress towards recovering costs. The authority is already breaking even on its economic regulation, and expects to break even on those other activities which are also within its financial control – safety regulation and aerodrome navigation services – by the end of the financial year 1977-78.

Staff

Following its decision to reduce staff numbers by 7 per cent by the end of 1976, the CAA had achieved a reduction in total numbers of 200 by 31 March 1976, with the aim of reducing by a further 300 by the end of 1976. Because it is a labour-intensive organisation, staff costs amount to 54 per cent of the authority's total costs. By reducing its staff numbers the authority is therefore making a significant (though for itself inevitably painful) contribution to a lowering of the financial burden on the industry.

The authority expresses concern about the effect on its future of the government's refusal so far to permit the application to the board members of public sector bodies like the CAA of the salary improvements recommended by Lord Boyle.

Economic policy

On the domestic front an innovation was the authority's approval for a 'Gatwick discount'. This was followed by approval for a very low experimental shuttle standby fare at weekends. In general, however, the authority's main task has been to continue the process of raising domestic fares in order to enable efficient operators to recover costs; there are signs that this objective has now been achieved on some routes.

On the international front the authority has been concerned by the high level of normal economy class fares on scheduled services both in Europe and generally. As a first step in the direction of securing a closer relationship between scheduled service fares and costs in Europe the authority withheld approval for proposed increases in normal economy class fares on certain routes to Spain and Portugal, while at the same time approving the introduction of Group 3 fares.

During this period the authority undertook a study of the practice of overbooking airline passengers. The authority's report concluded that a prohibition of overbooking, in the absence of any effective means against 'no-shows', would increase costs and therefore fares to the disadvantage of the vast majority of passengers who were unaffected. It recommended, however, compensation for those few passengers who are denied carriage because of overbooking, and almost all British airlines and many foreign carriers now subscribe to a voluntary compensation scheme.

After some liberalisation of their freight regulations, the authority has continued to study the demand for air freight in order to assess the need and scope for further regulatory changes.

In January 1976 the authority published its advice to government on airport development in South Wales and South West England – the last of its major regional airport studies. Studies into the needs of general aviation were developed further and in March 1976 the second joint report to the Standing Conference on London and SE Regional Planning and the authority on airfields for general aviation in SE England was published.

Safety

For the second consecutive year under review there were no fatal accidents to public transport aircraft on the British register. In general aviation there were 23 fatal accidents. Although this is the highest annual figure recorded flying hours have increased considerably in recent years and the general trend in terms of accident rates over periods of five years is not significantly affected.

On 1 January 1976 the authority introduced its mandatory scheme for reporting air incidents and defects. On the same date it became mandatory for cockpit voice recorders to be carried in the larger types of public transport aircraft. Changes in legislation were sought to require most public transport aircraft to carry ground proximity warning systems in 1977.

Consultations with industry were started on whether it was desirable, in view of past cases of pilot incapacitation, to require two pilots on all public transport aircraft carrying seven or more passengers, irrespective of the aircraft's weight. The authority also began to consult industry on a proposal to extend the legal requirements to hold an Air Operators' Certificate to public transport operators using light aircraft.

During this period Concorde passed through its final stages of airworthiness clearance, with the granting of CAA type certificates both to the engine and to the aircraft.

One of the most troublesome problems affecting the authority's safety divisions, especially on the airworthiness side, has arisen from the need to secure substantial increases in fees and charges which have been necessary both to catch up with inflation and to remove large elements of subsidy. In addition to intensive reviews, the Airworthiness Requirements Board is conducting, at the invitation of the authority's chairman, a fundamental review of the functions of the authority's airworthiness division to see if these can be carried out more economically or possibly in some cases disbanded.

CAA 'on financial target'

According to a statement issued on 23 September unaudited accounts for the three months to 30 June 1976 show that the CAA broke-even on those activities where it controls the recovery of its costs.

Over all its activities income for the quarter increased by 68 per cent from £9.4 million in 1975 to £15.8 million in 1976 while expenditure increased by only 15 per cent from £20.8 million to £23.9 million. This reduced the overall operating loss from £11.45 million to £8.1 million, comprising £7.9 million on domestic en route navigation services (Eurocontrol) and £0.2 million on the Highlands and Islands aerodromes.

'The real costs of the authority are now falling' say the CAA, 'and this, plus the increased income from its charges, will substantially reduce the authority's reliance on government grant this year (1976/77). It also means that the authority is "on target" with its plan to break-even during 1977/78. This is in accordance with the objective set the authority by HM Government to dispense with the need for grant in aid except in two areas – domestic en route navigation services and the operation of the Highlands and Islands aerodromes.'

* Civil Aviation Authority Annual Report and Accounts 1975-76, price £3. Available from CAA, PO Box 41, Cheltenham, Glos or by personal callers from CAA Central Library, Aviation House, 129 Kingsway, London WC2.

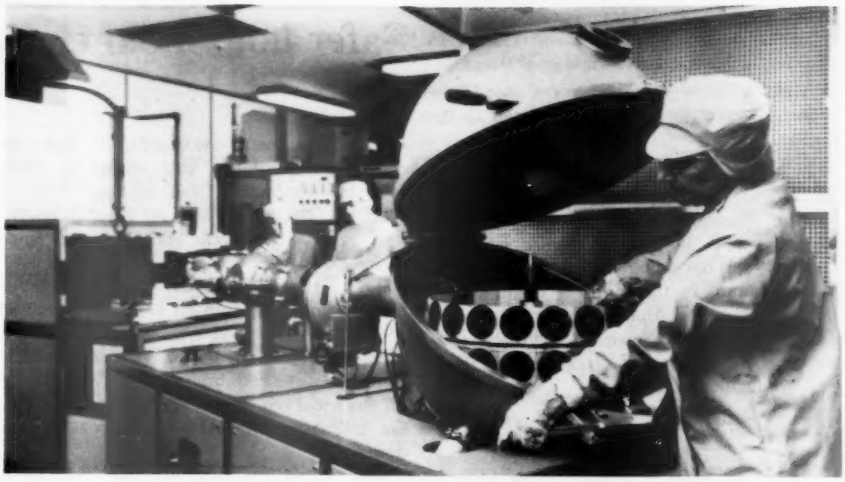
National Air Traffic Services

The National Air Traffic Services have continued with their re-equipment programme, re-phased to take account of the slower rate of growth in traffic movements. It is necessary however, to take account of the peak demand in summer, which in 1975 was equal to 1973 levels, and accordingly the process for automating and improving control systems has been continued.

The 9020D computer at the London Air Traffic Control Centre, West Drayton, which provides a flight data processing system, came into full operational service, as scheduled, in April 1975. Also at West Drayton there has been a significant improvement in the radar displays which now show the call sign and height of the aircraft under control.

At the Oceanic Control Centre, Prestwick, a new link provides the automatic exchange of flight data between the computers at Prestwick and the Canadian Oceanic Centre at Gander.

During the period a further Category III Instrument Landing System was commissioned at Glasgow, while the three systems already operational at Heathrow proved their worth during the autumn fogs of 1975.



In parts of this new 'clean room' of the Mullard plant at Southampton the air is said to be 100,000 times less polluted than that in a normal factory. The room has an ultimate capacity for the production of about 2,500, silicon slices a day for the computer industry in a super-clean environment better than 'class 10,000'. This means that the air within the room contains no more than 10,000 half-micro-meter sized particles in every cubic foot – compared with a typical factory environment usually rated at around a million particles per cubic foot. The more critical parts of the clean room are restricted to class 1,000 and the super-critical areas are down to class 100, although in fact most of these sections are said to have an actual particle count of less than 10.

Price Commission report on spectacles and contact lenses

The cost of private spectacles may often be higher than is necessary suggests the Price Commission in a report* published on 23 September. This is a matter which affects a large proportion of the population. About 24 million people wear spectacles and last year 7½ million pairs of spectacles were dispensed.

The commission point to the absence of any real competition among opticians. They consider that there should be less reticence about prices and that the public should be given more information. In particular, prices of frames should be clearly displayed and bills itemised, so that the patient can see what he is paying for. The commission found for example that the charges for identical spectacles could vary between £22.90 and £64.

The report shows that the chain from manufacturers to optician and on to the patient is a long one and that the level of net profit increases at each stage. Manufacturers of lenses and of frames earn modest net percentage profits of 3 to 7 per cent, whereas prescription houses – where lenses and frames are assembled – achieve over 11 per cent and small opticians 26 to 28 per cent. All sectors except lens makers have maintained or increased their profit margins despite the operation of the Price Code.

The report gives figures which show that on average a pair of spectacles for which the patient pays £18 may cost less than £4 to manufacture. The commission note that many firms are involved with each pair of spectacles but comment: 'of the total increase of about £14 between the manufacturer's price and the final selling price, no less than £10 is accounted for by the optician, and half of this is his net profit'. The 'net profit' made by the small optician comprises his remuneration as well as his return on capital. This, of course, is true of all small businesses and, in such cases, the fact that the net profit margin may be in the range of 25 per cent to 30 per cent – an apparently very high figure – has in itself little meaning. What is more to the point is whether a profit per head of £8,600 for an ophthalmic optician or £6,150 a year for a dispensing optician is or is not justified.

The report makes six recommendations:

1 There is a strong case for the adoption of pricing arrangements which are more rational and, at the same time, would be more readily understood by the patients. Prices could well be made of three elements: a prescription fee, the actual cost of the spectacles, and something for operating costs.

2 Prices and descriptions of spectacles should be clearly displayed in firms' premises and elsewhere so that comparisons can be made between the charges of one optician and another.

3 Bills for patients should be clearly itemised so that they can see what they are paying for.

4 Patients should be made more aware of the right to take their prescriptions, after their sight has been tested, to any qualified optician of their choice.

5 The patient should be in a position to make an effective choice between NHS and private spectacles. To ensure this, it is essential that the full range of NHS frames should be regularly stocked and displayed. It is also necessary that the quality or durability of NHS models should not be

* Prices of Private Spectacles and Contact Lenses. Price Commission Report No 20, HMSO, 65p.

Government welcome report for spectacle prices

Roy Hatterley, Secretary of State for Prices and Consumer Protection, has received the Price Commission's Report on the reference made in consultation with the Secretary of State for Social Services on the prices charged by manufacturers, ophthalmic prescription manufacturers and opticians for the supply of spectacle frames and lenses and of contact lenses otherwise than under the National Health Service.

The Price Commission consider that prices may be higher than they need to be and that what is wanted is more competition, less reticence about prices and a more rational and open system of pricing.

The Price Commission make certain specific recommendations about prices charged in the profession, their display and quotation, and the advertisement of styles of spectacles They also recommend action to improve the patient's position to make an effective choice between NHS and private spectacles.

The government welcomes the report and will consider urgently with the profession and manufacturers those parts which require action to protect the consumer and to see that he gets better information about the range of frames available and their prices.

The outcome will be announced in three months.

denigrated so as to prejudice the patient in favour of private frames . . . The NHS should offer a greater variety of frames.

6 Manufacturers and importers should be free to advertise styles of spectacles in the popular press.

By offering a wider range of NHS styles, it is thought that the present multiplicity of private spectacle designs (which may be excessive) and the level of imports might be reduced. At the same time some desirable rationalisation in the industry might result. The report notes that the Department of Health and Social Security is already considering the question of extending the range of NHS frames.

Contact lenses

Owing to the difficulty of separating contact lens activity from the general business of optical dispensing, it was not possible to collect sufficient information to enable firm conclusions to be drawn. Although only about ¼ million people have contact lenses, the field is expanding rapidly, and evidence suggests that the profitability of this work is certainly no less, and probably more, than that of dispensing private spectacles. It is expected that, as more firms enter this business and the volume of sales increases, improved fitting techniques and specialisation should stimulate more competition. This should in turn help to keep costs and prices down.

Child poisoning from household products

The findings of an investigation into accidents of child poisoning, and suspected poisoning, involving household products are set out in a report published on 23 September by the Department of Prices and Consumer Protection.

The investigation, undertaken for the DPCP by the Institute of Consumer Ergonomics, covered nearly 600 cases of children who were treated at five hospital accident and emergency departments between 1973 and 1975.

The report is being studied by the department with a view to identifying possible measures which might be taken to reduce the number of poisoning accidents involving household products. Steps already in hand include the preparation by BSI of a standard for child-resistant closures, and are actively pursuing this (meanwhile, the department is approaching manufacturers of some of the products most commonly associated with child poisonings, with a view to voluntary introduction of child-resistant closures); follow-up research into possible ways of reducing the number of accidents brought about by the transfer of paint solvents from containers; and research by the University of Aston on a series of hazard warning symbols capable of use for consumer products.

Copies of the report are available on request, free of charge, from the Consumer Safety Unit, room 101, Department of Prices and Consumer Protection, 1 Victoria Street, London SW1H 0ET.

Safer household electrical equipment

Compulsory safety standards for domestic electrical equipment will apply to goods sold by wholesalers and retailers from 1 October. They have already been in operation for manufacturers and importers since 1 April this year.

They are set out in the Electrical Equipment (Safety) Regulations 1975*, as amended by the Electrical Equipment (Safety) Amendment) Regulations 1976, which embody comprehensive requirements for the safety of all electrical equipment 'designed or suitable for domestic use (whether indoors or out-of-doors)'.

The regulations deal not only with electrical safety (earthing, insulation, accessibility of live parts) but also mechanical safety, fire and radiation hazards, accessibility of parts which get hot enough to cause injury and safety marking.

Both sets of regulations have been made under the Consumer Protection Act 1961 and are enforced by local trading standards officers. It is an offence under this act for any person to sell or possess for sale in the course of a business any goods (including second-hand goods) which do not comply with prescribed safety requirements. Manufacturers, importers, wholesalers and retailers are now all liable to prosecution if they sell non-complying equipment.

Notes

The Electrical Equipment (Safety) Regulations 1975 were announced on 21 August 1975, and the Electrical Equipment (Safety) (Amendment) Regulations 1976 were announced on 6 August 1976.

The requirements imposed by the Electrical Equipment (Safety) Regulations 1975 may be summarised as follows:

In addition to having adequate basic or functional insulation, equipment will need either adequate additional or supplementary insulation or provision for earthing metal parts. Live parts must not be accessible without the use of tools. Moving parts must be enclosed or otherwise sufficiently guarded; so, where practicable, must parts that get hot enough to cause injury. The generation of excessive heat and the emission to a dangerous degree of toxic gases or radiation of any kind is prohibited. Electric fire, toasters and other 'open heaters' with elements capable of being touched by hand must have all-pole switches if switches are fitted. Safety instructions must appear on equipment or, if this is impracticable, must accompany it.

The amending regulations, in addition to providing for some amendments of a technical nature to the 1975 regulations, require electrical equipment, where appropriate, to have an effective cord anchorage or other suitable device to prevent tension in the flexible cord being transmitted to the terminals. They prescribe safety requirements for lampholders (including those incorporated in lighting fittings) to reduce the risk of live parts being inadvertently exposed when removing or replacing a lamp or shade ring; require 'pear' switches to be so designed that they do not come apart inadvertently in normal use; include requirements which ensure that when a lamp is being inserted, no part of the lamp or lampholder can become live while it can be touched. Alternatively in the case of lampholders for double-ended lamps, the lampholder or fitting must bear a warning about disconnection before a new lamp is inserted. They also amend the provision in the 1975 regulations concerning surface temperatures of radiant electric fires (parts which get hot enough to cause injury must be enclosed or guarded) by exempting them from this provision if the temperature rise of such surfaces above room temperature does not exceed 85°C; and make it clear that, as from a prescribed date, the provision in the 1975 regulations concerning surface temperatures applies to surfaces of electric cookers more than 750mm above floor level – as well as surfaces below this level for which the operative dates referred to above already apply. Some of the provisions in the amending regulations will not take effect until 1977-78.

Both sets of regulations have been the subject of consultations with interested bodies and with the Advisory Committee on the Safety of Household Electrical Equipment which was set up by the secretary of state for prices and consumer protection in April 1975 'to advise her on her responsibilities in relation to the safety of domestic electrical equipment, with particular reference to the administrative guidance to be issued by her department from time to time concerning the Electrical Equipment (Safety) Regulations'. The 17 members were chosen so as to represent all fields of interest – including those of consumers, manufacturers, distributors, standards organisations and testing and approval bodies.

Except for certain amendments the regulations do not refer to published standards. The department however published on 18 September 1975 administrative guidance listing standards that, in its opinion and in the light of the advice of the advisory committee, afford the degree of safety required. A reprint of the administrative guidance will be published soon and will include the amendments resulting from the 1976 amending regulations.

* The Electrical Equipment (Safety) Regulations 1975, SI 1975 No 1366, and the Electrical Equipment (Safety) (Amendment) Regulations 1976 SI 1976 No 1208, are available from Her Majesty's Stationery Office, prices 18p and 20p, respectively.

ECGD addresses

The Export Credits Guarantee Department's head office is at Aldermanbury House, Aldermanbury, London EC2P 2EL. (Tel. 01-606 6699). ECGD has 10 local offices in various parts of the United Kingdom, and these are listed from time to time in *Trade and Industry*.

Better deal for radio/TV buyers – new code on purchase and repairs

A no-strings comprehensive 12 month guarantee and improved servicing standards are features of a new code of practice adopted by the Radio, Electrical and Television Retailers Association which was welcomed on 23 September 1976 by Gordon Borrie, Director General of Fair Trading.

Speaking in London at the launch of the code, Mr Borrie said: 'This is the eleventh code of practice my office has negotiated although, of course, it is the first to come into effect since I took up the post of director general in June. And there are three points I particularly welcome. On servicing and repairs it marks a significant advance on the codes adopted so far; Retra members are promising publicly to get to the customer faster and complete the repair faster. The no-strings guarantee makes it clear to customers exactly what they can expect when they buy from a Retra member. And thirdly I am delighted that Retra are banning "worth" and "value" claims and are agreeing to refund deposits when goods are not delivered on time. They have anticipated changes I would like to see in industry and commerce, generally.

'I know that Retra member-firms have been proud of their servicing and repair facilities in the past; but now they are raising their targets even higher and – if I may be forgiven the puns – I think they deserve a plug for being such a switched-on organisation.'

Retra represents 2,000 companies with more than 4,000 retail outlets in the UK, including nearly all the large multiples. Members can be identified by a distinctive triangular black white and red symbol displayed in their shops.

The code provides a comprehensive guarantee covering both parts and labour for 12 months regardless of any other guarantee offered by the manufacturer. If, under guarantee, the retailer is unable to repair an item within 15 working days, he should lend a similar item to the customer. Where this is impracticable the dealer should extend the original period of guarantee by the number of days the customer was without the item.

Retra retailers agree under the code to make a first visit to a customer within three working days of receiving a request. Repairs should be completed within 15 working days of the first visit and customers should be told the reason for the delay if they are not finished on the first visit. Retra dealers have also agreed to tell customers of any minimum service charge. Any repair by a Retra member will be guaranteed for a minimum of three months.

Customers will be encouraged to go back to their Retra retailer if they have any problems. If there is a dispute, either the customer or the retailer can refer it to the secretary of Retra. In cases where the secretary alone cannot reach a solution, the problem can be taken to the Retra conciliation panel consisting of an independent chairman, a trading standards officer, a consumer representative, a member of Retra council and a representative from the appropriate manufacturer's association. Any action recommended by the panel will be honoured by a Retra member within 15 days.

The code provides that Retra members will refund a deposit if goods fail to arrive on time. They will give receipts, detailed invoices and as much information as possible about goods to their customers. Another important point is that Retra retailers will ensure that goods they stock are manufactured to the relevant safety standards; when an item is found to be electrically or mechanically dangerous, the retailer will wherever possible take steps to contact customers so the goods can be modified or exchanged.

The code will be monitored by Retra and details of cases dealt with each year will be given to OFT.

Ministerial responsibilities at Department of Energy

Tony Benn, Secretary of State for Energy, has asked Dr John Cunningham, who was recently appointed Parliamentary Under-Secretary for Energy, to assume under his overall control responsibility for overall energy policy and energy conservation; follow up work arising from the National Energy Conference and consumer aspects of energy.

Dr Cunningham will also assist Dr Dickson Mabon, Minister of State in the discharge of his special responsibilities for oil and gas.

These responsibilities are the same as those of Gordon Oakes, Dr Cunningham's predecessor.

The ministerial responsibilities of Dr Dickson Mabon and Alex Eadie, Parliamentary Under-Secretary of State, remain unaltered.

Patents endorsed 'Licences of Right'

Under Section 35 of the Patents Act 1949 the following patents were endorsed 'Licences of Right' on the dates specified.

Number	Grantee	Subject-matter
6 September 1976		
1,165,045	Standard Telephones and Cables Ltd	Epoxide resin seals
1,317,510	Standard Telephones and Cables Ltd	Improvements in or relating to computers
1,322,246	Standard Telephones and Cables Ltd	Interface for start-stop terminal with data network
1,350,850	Standard Telephones and Cables Ltd	Measuring noise in PCM systems
1,362,483	Standard Telephones and Cables Ltd	Improvements in or relating to telephone switching equipment
1,377,236	Standard Telephones and Cables Ltd	Microphone amplifier
1,400,148	Standard Telephones and Cables Ltd	Digital data network interface for datel subscribers
1,279,507	International Standard Electric Corporation	PCM switching system
1,376,683	International Standard Electric Corporation	VF keying systems
1,410,381	Nippon Victor Kabushiki Kaisha	Angle modulated wave demodulation system
1,165,364	John Carnegie Orkney	Improvements in or relating to reciprocating heat engines
1,310,899	Noel Heaps	Improvements in apparatus for winding packages of textile yarn
1,395,718	Exacta Circuits Ltd.	Printed circuits
13 September 1976		
1,332,296	The British United Shoe Machinery Co Ltd	Improvements in or relating to cutting presses
1,414,630	The British United Shoe Machinery Co Ltd	Improvements in or relating to the grading of patterns
973,674	Commissariat A L'Energie Atomique	Improvements in and relating to a periodmeter for a nuclear reactor
1,151,789	Commissariat A L'Energie Atomique	Improvements in or relating to a sensing device having a variable impedence and the application thereof to an apparatus for supervising from a distance the level of oil in a tank
1,010,672	Ronald Charles Thomas Earl	Improvements relating to stands primarily for suspending garment hangers
1,341,543	International Standard Electric Corporation	Raster scan antenna
1,380,764	Royal Industries Inc	Improvements relating to fluid operated jacks
1,381,338	The Post Office	Improvements in or relating to signal receivers
15 September 1976		
971,521	James Robertson Greer	Improvements in pressure transducers
1,058,020	G. Brady and Co Ltd	Improvements in operating mechanisms for rolling doors or shutters
1,239,943	Colorastic Ltd	Improvements in roller shutters
1,307,227	Orsymonde	Improvements in or relating to pharmaceutical compositions comprising dicarboxylic acids and their derivatives
1,349,467	Feb (Great Britain) Ltd	Improvements in the transportation and delivery of concrete
1,398,570	Repco Inc	Transmitter and receiver device with latching mechanism for connecting a battery
1,400,247	Chinoin Gyogyszer es Vegyeszeti Termekek Gyara RT	Process for the preparation of prostaglandins
1,421,800	Pratt Burnerd International Ltd	Actuating cylinders
1,427,109	Societe Industrielle des Betons Legers (Societe Francaise SIBEL)	A self-supporting beam for use in constructing concrete floors using said beam
1,427,582	Protex Fasteners Ltd	A toggle fastener

Any person who claims that the patentee at the time of endorsement of any of the above patents was precluded by a contract in which claimant is interested from granting licences under the patents may apply for cancellation of the endorsement on Patent Form No. 45 within two months after the date of endorsement.

E. Armitage
Comptroller

August sales give boost to London's Commercial Motor Show

On the eve of the International Commercial Motor Show at Earls Court news came that in August for the first time this year, commercial vehicle sales were higher than in the same month last year. Last month 20,730 commercial vehicles were sold in Britain 13.5 per cent more than in August 1975.

Export sales also look good, report the Society of Motor Manufacturers and Traders. In the first half of 1976 a record 105,000 vehicles (up 16 per cent) valued at £286 million were sold abroad. For the first time the number of vehicles exported exceeded sales of British commercials in the UK (95,064 in the six months ended June).

Importers at the show who were not present at the 1974 exhibition include UMO Plant showing vehicles from Russia, France's Renault and Peugeot and Honda from Japan. There are five vehicle firms each from France and Germany, three each from Japan and Sweden and one each from Holland, Italy and Russia.

The show opened on 24 September and closes tomorrow (2 October).

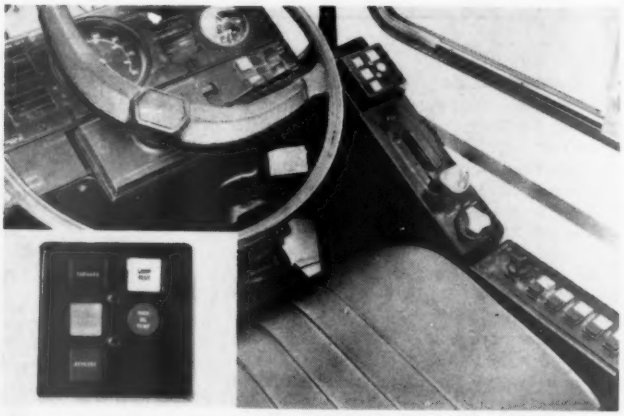
The Ford Fiesta and the Ford Transcontinental – the smallest and the largest products of Ford in Europe. Ford are showing a new Long Haul Cab for the Transcontinental, designed to provide the ultimate in comfort for drivers engaged in long overseas operations under arduous conditions. Picture below shows three features of the new cab – gas cooker, wash-basin and refrigerator (with lid off).

Motorist's-eye-view of the new look Scammell Trailers line, on display. All trailers in the company's 1977 range feature high intensity fog lamps incorporated in the rear lamp services.

Left : This revolutionary prototype double-deck bus, produced by Leyland Truck and Bus, was driven off London's streets to the Commercial Motor Show. The bus, which has the lowest entry steps, highest headroom, and quietest engine pack of any double-decker, has been in trial service with London Transport for more than two months. After the show it will go back into service.

Leyland Cars has mounted its strongest-ever light commercial vehicle display at the show with 12 vehicles on display.

Bedford broke new ground at Earls Court with the debut of a brand-new Bedford light van model, the Chevanne, a 500kg (approximately ¼-ton) payload light van derived from Vauxhall's Chevette car range. Other Earls Court 'first-timers' include a prototype of a 27-seat 'midi-bus' being developed jointly by Bedford and Marshall's of Cambridge.



A simple push-button control panel next to the driver's seat ensures a fail-safe operation for the GKN-SRM automatic transmission for vehicles up to 38 tonnes gvw. The panel, designed by GKN Transmissions Ltd, has just three push buttons and two warning lights and is shown in the inset.

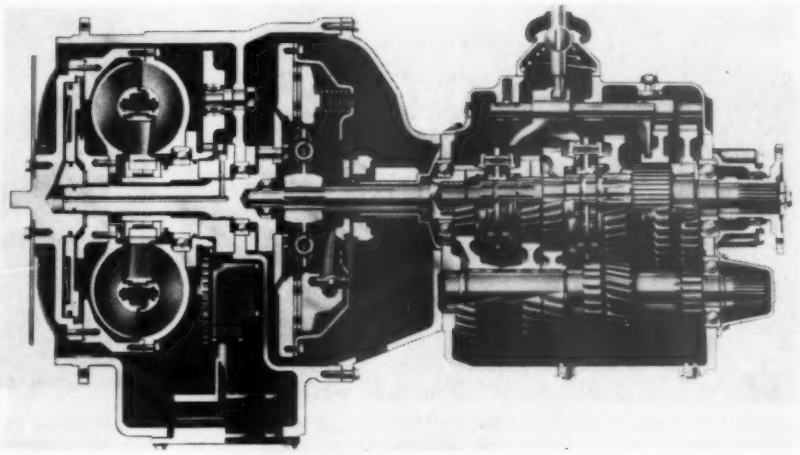
This giant 112-wheel trailer is believed to be the largest girder trailer currently operating on British roads and is the latest acquisition of Wrekin Roadways of Telford. The £250,000 trailer has 14 independent steering axles with 112 wheels, each fitted with Pirelli Cinturato SN55 7.50-15 16pr radial ply tyres.

The Translite wheel from GKN Castings displayed for the first time in Europe and believed to be the world's first cast aluminium cv wheel. Two sizes are available : 7.50 × 22.5 and 6.00 × 19.5 offering weight savings of 46 lb and 25 lb, respectively over the equivalent steel wheels. A new tubeless steel wheel – the Centaur – was launched at the show by GKN Sankey Ltd and is expected to make a strong impact on the export market.

Perkins Engines has appeared at every Commercial Motor Show since they began in 1935, and this year features new engines designed to increase their penetration in world markets. Although new to the UK, the Perkins 4.165 automotive engine has earned itself an excellent reputation in Europe for smooth and sustained power in diesel versions of Volkswagen's LT range. Picture shows how the installation provides easy access for servicing.

The Britax automatic seat belt – the most comfortable type available say BSG International who are featuring this and a wide variety of safety equipment. It adjusts automatically to the wearer and allows complete freedom of movement under normal conditions. If the vehicle's speed or direction changes suddenly the belt locks firmly, holding the wearer securely in his seat. Britax manufactures a range of seat belts.

Details are exhibited by the Brockhouse Group of a torque converter transmission designed for commercial vehicles which is being evaluated by the Post Office for use in general-purpose vehicles based on the Leyland 'Boxer' chassis. The torque converter, which is produced by Brockhouse Transmissions Ltd of West Bromwich, is fitted between the engine and the standard clutch and gearbox and affords certain of the advantages of an automatic transmission. It incorporates a lock-up device which provides direct drive at selected engine speeds and, in this mode, smooth gear-changes are achieved by the automatic introduction of the torque converter. Twenty-two torque converters have, so far, been supplied.



Among exhibits by the Rubery Owen Group is a demonstration of RoSafe safety units as a means of reducing tyre damage. A major brewery is putting the system to use in the wheels of its light delivery vans and police forces have had the system incorporated into Pandas and motorway vehicles.

Chrysler UK recently announced that they would sell all truck models under the name of Dodge (except for some models for the municipal market). Picture shows the Dodge 100 series Commando G08 lightweight box van. There are eight basic Commando rigid models and the series is claimed to be one of the most modern in Europe.

Prime Minister opens UK machine tool exhibition

The Prime Minister, James Callaghan, opened the International Exhibition of Machine Tools, Gauges and Tooling, MACH 76, at the National Exhibition Centre, Birmingham on 22 September. The exhibition, which is organised every four years by the Machine Tool Trades Association, covers machine tools and the associated gauges, tooling, automatic controls and components and closes tomorrow (2 October). It is the largest and most comprehensive machine tool exhibition ever organised in the UK. Over 1,000 manufacturers from 26 countries are represented.

Addressing a luncheon given by the Machine Tool Trades Association, the prime minister stressed the key position that machine tools hold in the industrial structure of this country. He said: '... the future of the industry lies in designing, manufacturing and delivering tools with a high added value for those markets with the potential for growth. We cannot afford to leave it to exporters from other countries to exploit and pre-empt the markets with real growth before making the decision to enter those markets ourselves.'

Mr Callaghan reminded the assembled manufacturers of the measures the government had taken to stimulate a healthy industry; these included the accelerated investment scheme to hasten the introduction of new plant and machinery throughout British industry, and the £20 million machine tool industry scheme designed to promote the development of new products and the modernisation of production facilities among machine tool manufacturers. The scope of the latter scheme was recently broadened so as to appeal to small and medium-sized firms and to cover those in the closely related manufacture of one-off tooling and assembly machines.

Mr Callaghan addressing the MTTA.

During his visit to the National Exhibition Centre, Mr Callaghan inspected the Government Services Centre. The GSC supplies businessmen with details of the assistance and advice they can get from government departments and agencies, particularly where it helps to promote British exports. This free information service began seven months ago when the exhibition centre opened. Asked how many inquiries had been dealt with so far, Nic Hale (left), of the GSC's staff, told him the total already came to nearly 6,000. Mr Callaghan is seen on the GSC's display frontage. At the time of his visit the frontage was featuring a five-panel display calling upon firms to play their part in the current 'Export Year' campaign (one of the panels can be seen on the left). Also in the picture are Leslie Huckfield, Parliamentary Under-Secretary of State, Department of Industry, and MP for Nuneaton (second from right); and John Thompson, Regional Director, Department of Industry, West Midlands (extreme right).

Design Centre exhibition to feature printing since Caxton

During the 500 years since William Caxton established his press in Westminster – the first in the country – the British printing industry has been well to the fore in the development of techniques, skills and applications for printed matter. Some idea of the tremendous scope of modern printing methods will be gained from the Design Centre exhibition 'It all began with Caxton', sponsored by the British Printing Industries Federation and on public view from 13 October until 20 November.

Examples of the work of about 140 firms in the printing and allied trades will be shown. All the items on display have been selected for the high quality of their design and production, taking into account their suitability for purpose. The exhibits have been divided into 17 categories.

Exchange control – higher limit for business travel

The Treasury announce that as from 22 September the limits within which authorised banks, tour operators and travel agents may issue foreign exchange facilities for business travel without the prior approval of the Bank of England are increased to £3,000 for any one journey at a rate not exceeding £75 per day. There has been no change in the arrangements for holiday travel.

Exchange control rules are kept under continuous review and, while there is no change of policy on travel arrangements generally, the delegated limits for business travel are being raised from £2,000 to £3,000 per journey subject to a maximum daily rate of £75 instead of £40 in order to remove a possible hindrance to British exporters.

Technology news

Nuclear power for the future – source of energy or risk?

Concern about an energy future based substantially on nuclear fission, has been expressed by the Royal Commission on Environmental Pollution in its sixth report, 'Nuclear Power and the Environment'*.

The commission has not been convinced that the expanded use of nuclear power, projected to meet energy needs in the coming decades, must necessarily be regarded as inevitable, suggesting instead that increased support should be given to the development of alternative approaches, including energy conservation.

The report, which has been prepared under the chairmanship of Sir Brian Flowers, deals principally with the environmental problems that would be associated with such nuclear expansion.

Among the problems considered are those of ensuring the safe containment or disposal of the increased quantities of radioactive wastes; the environmental impact of the siting of many nuclear stations including the possible effects of the waste heat generated; and the risk of accidental release of radioactivity.

Such expansion, states the report, would imply the use of fast breeder reactors on a large scale and a 'plutonium economy' in which this element would provide a principal fuel for energy supply. The development would also have potential implications of another kind. World growth in nuclear power would be likely to facilitate the proliferation of nuclear weapons. There would be the risk of terrorist action against nuclear installations using nuclear materials, especially plutonium, as threats against society. Protection against these risks might call eventually for security measures that would be damaging to a free society.

The commission believes that these risks for the future are real and serious, and that the country should not rely for energy supply on a process that produces such a hazardous substance as plutonium unless there is no reasonable alternative.

The long-term issues raised by substantial nuclear growth, which involve social, economic and ethical as well as environmental considerations, need to be widely appreciated and weighed to provide an adequate basis for decisions. The commission recommends that a special procedure should be adopted so that the issues are clearly presented for public debate; and regards the report as a first step in this process.

Providing an independent assessment of the arguments for and against nuclear development would be an important role for a high-level advisory body on energy policy.

The current arrangements for deriving standards for permissible exposure to radiation have been approved and after examination of the present control machinery which protects the public against discharges of radioactivity to the environment from nuclear installations, no serious deficiencies have been found. However, several recommendations are made designed to improve the system for the future, in particular, that the National Radiological Protection Board should be given the statutory responsibility for advising on basic standards; and that this body should also be responsible for ensuring the adequacy of the programme of research on environmental pathways on which control ultimately depends.

Several areas are identified in which there is a need for further research. The commission recommends that this should be undertaken under the aegis of the Natural Environment Research Council and in consultation with other bodies, including the NRPB. The report also recommends that the new central inspectorate proposed in the commission's last report should assume responsibility for determining and controlling discharges of radioactivity to the environment, in consultation with the Ministry of Agriculture, Fisheries and Food and the NRPB.

Present plans for radioactive solid wastes arising from nuclear power, including particularly the high-level liquid wastes created by fuel reprocessing which will eventually be converted to solid form by vitrification are thought to be inadequate. It is argued that there should be no commitment to a large programme of nuclear power until a means of ensuring the safe containment of these wastes for the indefinite future has been established beyond reasonable doubt.

A number of recommendations for action are made: in particular, that responsibility for waste management strategy should be clearly vested in the Secretary of State for the Environment who should appoint a nuclear waste management advisory committee to assist him; and that a nuclear waste disposal corporation should be established with the responsibility for developing and operating the required waste disposal facilities.

Commenting on criticisms in the report, the United Kingdom Atomic Energy Authority expressed disagreement with that part of the report which deals with the likely future effect on nuclear power on the environment and on society as a whole. 'We believe the fears expressed on these issues are greatly exaggerated.'

Noting that the commission did not oppose the development of a commercial fast reactor on environmental grounds, the authority asserts that the uncertainty of future energy demand and supply make it essential that development of the fast reactor should proceed uninterrupted, with the building of one full-scale fast reactor to demonstrate the efficiency, environmental acceptability and safety of fast reactors in the time-scale required.

However, the authority does not advocate an immediate commitment to a large programme of fast reactors, and argues that future decisions will not be pre-judged by building a single large station, which would be largely self-supporting.

The development of a nuclear programme of the size which might be required in the future would not, it is contended, be beyond the economic resources of the country. Money needed to explore the development of alternative energy sources should not, it is felt, be provided by cutting funds for the commercial fast reactor. There is strong evidence that none of these alternative sources could make a major contribution to the country's energy needs in the time-scale required.'

The authority also disagrees with a number of statements in the report on the dangers of plutonium, and denies that its use would require a major increase in national security.

'For over two decades we have fully recognised the importance of the secure handling of plutonium which is produced as a by-product of burning uranium in thermal reactors and which itself can be burnt in fast reactors. Both the government and the authority have consistently given the greatest attention to its security in the light of the circumstances of the time and this is a matter which is constantly under review. On the basis of our experience and knowledge we do not believe that a terrorist attack to seize plutonium would be successful or even if it was it would serve much useful purpose for their ends.'

Dealing with waste management and the ultimate disposal of nuclear wastes, 'The UK are in close touch with work done overseas and are already associated with plans for closer co-ordination of worldwide research in this.

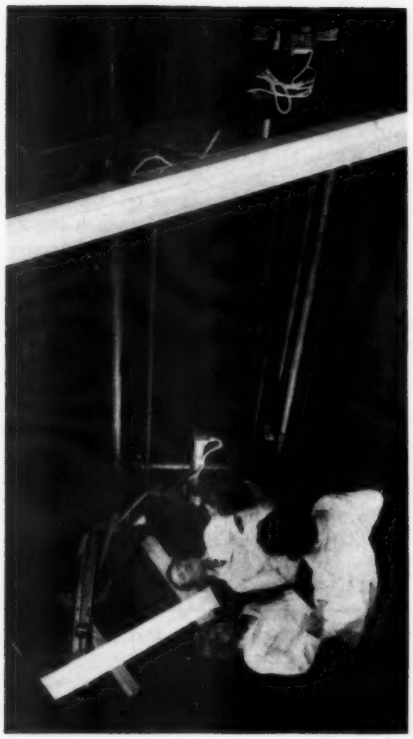
'In Britain, the authority and British Nuclear Fuels Ltd, are engaged in a substantial programme for the glassification of highly active wastes which is complementary to work on waste solidification being done abroad.

'The authority are also associated with studies for the disposal of vitrified wastes in geological formations on land, and for similar disposal on or under the deep ocean floor.

'Present methods of storage of waste are regarded as safe and completely satisfactory for current conditions. The authority are confident that the research and development programme being carried out will lead to a safe form of permanent disposal of nuclear wastes when it is required.'

* 'Nuclear Power and the Environment'. Available HM Stationery Office, price £2.65.

Light research



Using a polar photometer to measure the distribution of the light from fluorescent tubes. The tube can be raised from floor level to a height of 4m and rotated through 360 degrees. A plastic mirror is attached to an arm which can also turn through 180 degrees, while the candle power of the fitting is recorded at intervals. Thorn Lighting's research centre is looking into the efficiency of light fittings and their improved design and engineering.

Wind energy systems – generators and heaters

Nearly 200 delegates from 21 countries attended the international symposium on Wind Energy Systems organised by BHRA Fluid Engineering recently, which concentrated on practical systems and the economics of wind power.

A discussion led by Louis Divone of the US Energy Research and Development Administration, Jack Allen of AERE, and G. C. Piepers of the Netherlands, produced details of national schemes. Potential markets, such as heating glass houses, were pinpointed during the course of the session. Mr Allen briefly described a project funded by NRDC which involved the use of wind power to supplement oil-fired heating.

Mr Divone, head of ERDA's wind energy branch, said four machines would be built in the USA as a follow-up to the first 100kW wind generator erected at Sandusky. The first two will be two-blade, horizontal axis types rated at 200kW and designed for low wind speeds, while the other two machines will produce 1.5MW each and are designed for high wind speeds. These larger machines would cut out an intermediate stage originally proposed in the ERDA programme which would now move direct from 38m (125 ft) to 61m (200 ft) diameter wind generators. Operational experience was necessary, and that was the reason for the two smaller types. The logistical problems of operating wind generators were more difficult to solve than the technical ones, a view with which Mr Allen agreed.

A 45m (150 ft) blade (giving a 90m diameter windmill) would be built to investigate the economics of producing such sizes because it was already clear that in general wind, energy costs were reduced as generator size increased. Mr Divone stressed that, because of these large sizes, the technical comparison was no longer with helicopter blades but with building aircraft wings which had to turn at, say, 38 rev/min; that was the measure of the problem.

Mr Piepers highlighted the difficulties facing a country where land use was very important. He thought siting large machines would cause the greatest headaches, amenities could be spoiled, people would not want to live near such structures, which would have to be close together to save land and operating costs. Converting mechanical energy into electrical energy and feeding this into the national grid was also likely to be expensive, and would add to capital costs.

Contributions from the floor of the meeting ranged over the question of small wind turbines for space heating, which it was agreed could offer a valuable market provided houses were well insulated. Wind power as a supplement to other forms of heating was advocated by one speaker, whose company Wind Energy Supply Co UK, was developing this type of plant with NRDC support. Mr Divone said that the amount of energy and how much each type, whether fossil fuel, solar or wind produced, would cost was less important than having as many reasonable forms of energy at a stage of development which would enable a choice to be made. The cost could not be measured in direct terms of money; land use, the environment, availability of the energy source, and its effects on human life must all be considered. The total picture must be assessed, and wind energy must be included in that assessment.

Further details available from Publications Sales, BHRA Fluid Engineering, Cranfield, Bedford MK43 0AJ.

Agreement on fast reactor technology

An agreement providing for the exchange of technology in the field of liquid metal-cooled fast reactors has been signed by the United Kingdom Atomic Energy Authority and the United States Energy Research and Development Administration. The agreement was signed in Germantown, Maryland, on 20 September by Dr T. N. Marsham, deputy managing director of the UKAEA reactor group, on behalf of the UKAEA, and a representative of ERDA.

This agreement, which continues collaboration which has been going on for many years, is intended to be a mutually beneficial, balanced exchange between the United States and the United Kingdom. The objective of both sides is to avoid unnecessary duplication of research and development activities in areas of mutual interest (and to enable each country to benefit from the other's technology). Under the agreement, co-operation may take the form of exchange of scientific and technical information and results and methods of research and development, the organisation of seminars and other meetings, the exchange of scientists and engineers, the exchange of materials and components for testing, and other specific forms of co-operation as may be agreed.

The agreement will permit co-operation in reactor physics, reactor safety, fuels, materials, fuel recycling, reactor and plant components, sodium technology, non-nuclear test facilities, quality assurance, overall fast reactor programmes, operation of fast reactors, economic and environmental considerations, and topics of interest to industry.

The term of the agreement is five years, and it may be further extended by mutual consent.

Medical research in Spacelab

British Aircraft Corporation, Electronic and Space Systems has completed for the European Space Agency a unique study contract for Spacelab which could be beneficial to medicine.

In the study BAC has investigated the feasibility of developing a general purpose floating zone electrophoresis facility which could be carried into space in the earth orbiting Spacelab. Electrophoresis is the movement of ionised biological molecules in an electric field and is widely used as a diagnostic aid in medicine including heart disease and cancer research and in studying the degree to which people are immune to particular diseases.

The use of electrophoresis as a technique for preparation of biological agents used in treatment of patients offers very substantial advantages, especially in the case of some of the more valuable and rare elements separated from transfusion blood. On earth the separation process at the preparative scale is severely limited by gravity induced convection forces and by charge effects on the wall of the container. In the zero gravity conditions of space these effects would be removed since there would be no need for a container. It is believed that this would result in a much more efficient and practical process with wide medical benefit.

The concept of floating zone electrophoresis has been developed by a team working in Edinburgh at the protein fractionation centre of the Scottish blood transfusion service under John Watt, scientific director of the centre. The study is concerned with the engineering aspects of putting biological samples into Spacelab, the control equipment and everything associated with the execution of the process.

Publications

Subsidies: Britain and West Germany

Public Assistance to Industry. Protection and Subsidies in Britain and West Germany, edited by W. M. Cordon and Gerhard Fels. (258 pages. Published on behalf of the Trade Policy Research Centre, London, and the Institut fur Weltwirtschaft, Kiel, by MacMillan. 1976 £10.00. ISBN 333 19031 9.) This work consists of six essays contributed by economists from both the United Kingdom and the Federal Republic together with two further papers by the editors in which they comment on and summarise the arguments of the main text. The issues associated with government intervention are focused on by alternating between the experience of West Germany, generally characterised as a market economy, and that of the United Kingdom, which is often cited as an example of the mixed economy. Chapter one, prepared jointly by the editors, introduces the main contributions and briefly identifies the main topics. Chapters two and three deal with both the concept and computation of effective protection and relate these to German and British industry. Chapter four examines overall assistance to German industry both qualitatively and quantitatively. This paper also contains a note on the construction of both nominal and effective protection rate indices. Financial assistance to British industry is the subject of chapter five, in which specific industries as well as general incentives are examined. The final two papers, chapters six and seven, analyse the protection of the textile industries in Germany and the United Kingdom, with particular reference to competition from producers among the developing countries. In the final chapter one of the editors concludes by discussing the logic of government intervention. Full notes and references are appended to all of the papers and this volume also carries brief biographies of the contributors as well as profiles of the two institutes concerned in the study. Those interested in this study in government and industry should also find the following recently published volume of interest – *The Economics of Industrial Subsidise*: Papers and Proceedings of the Conference on the Economics of Industrial Subsidies, held at the Civil Service College, Sunningdale, edited by Alan Whiting. (271 pages. HMSO. 1976. £5.50. ISBN 0 11 511638 9.)

Britain: Finance

Anatomy of UK Finance 1970-75, by Christopher Johnson. (275 pages. Financial Times, 10 Bolt Court, Fleet Street, London EC4A 3HL. 1976. £25.00. ISBN 0 900671 61 0.) This study reviews financial developments in the British economy between 1970 and 1975. Explanation of these developments is provided by means of an analysis of the flows of funds between sectors within the context of national income and expenditure patterns. Analysis by sectors is conducive to an understanding of the economy as a whole while on examination of the flow of funds of each sector facilitates an appreciation of the particular manner in which the problems of finance and inflation have affected it. The arrangement of the text reflects these considerations: thus, after an introductory essay on the purposes and methodology of the study, the volume's six main parts are devoted to a sector by sector analysis. The personal sector is the concern of part one, and, as with all the subsequent sectoral studies, begins with a short summary of the main developments in this field during the years 1970-75. This is followed by notes on the definition of the sector in question, a feature which is common to all parts of the study. Topics dealt with include personal income and expenditure, borrowing by the personal sector, theories of saving and international comparisons of household financial behaviour. This part concludes with notes on the text, mainly references to sources, and tabulated data; two items featured in all sectoral studies. Part two explores the industrial and commercial company sector and includes, among many other matters, an assessment of theories of investment and international comparisons. The banking sector is dealt with in part three. Of particular interest in this section is the discussion of the Bank of England's 1971 directive *Competition and credit control*. The financial sector as such is the subject of part four. This is an extensive analysis of other financial institutions, among which are building societies, pension funds, investment

Coastguard!

An official history of HM Coastguard by William Webb with a foreword by HRH The Prince of Wales

Formed in 1822 to combat the vast smuggling 'trade' that then existed, HM Coastguard has an interesting and varied history. With smuggling in decline in the mid-nineteenth century, HM Coastguard was placed under the Admiralty as a naval reserve, in which capacity it served until the end of the first world war. The Board of Trade then took over and developed the Coastguard into its modern function of co-ordinator of search and rescue operations around Britain's, 2,500 miles of coastline. The author gives a fascinating account of the development of this highly professional force over the last 150 years.

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and unit trusts and finance houses. Part five, the public sector, examines central government, local authorities and public corporations and surveys the public sector current account, the capital account, the growth of public expenditure and the financing of the public sector borrowing requirement. Many other subjects are discussed in this part and the relationships between the various subsectors are clearly shown by the flows of funds analyses. Part six deals with the overseas sector, which, as the author points out, is not, strictly speaking, a sector of the UK economy at all. It can be defined as the sum total of all economic entities not resident in the UK, whether they be persons, companies or governments. Transactions between the UK domestic sectors and the overseas sectors are recorded as the balance of payments and it is this which forms the main consideration in this part. The study's conclusions are given in part seven. Included here is an appraisal of the New Cambridge views on the relationship between the surpluses and deficits of the various sectors. An interesting study of flow of funds in major overseas countries is presented in appendix A while appendix B provides notes and comments on the statistical sources utilised in the text. The third and final item is a select bibliography, arranged under the sectoral study headings which form the main text. The wealth of details in this publication include 240 tables and 15 charts and these, together with the new estimates and analyses, make this an original study of a very complex subject.

Ships: tankers

Chemical Tankers: The Ships and the Market, by Michael Corkill. (191 pages. Fairplay Publications Ltd, 1 Pudding Lane, London EC3R 8AA. 1976. £50.00 post free. ISBN 0 905045 02 5.) For the purposes of this report, the term chemical tanker is an all encompassing one and includes sophisticated and simple parcel tankers, shortsea chemical carriers as well as other types specifically designed to carry specialised cargoes. This newly published study examines both development and current practice in the field of chemical carriage by sea and also assesses the market context in which the chemical tanker operates. Part one of this three-part study focuses on the evolution of chemical tankers and their cargoes. The development of tanker fleets is also described, largely through biographies of most of the major operators. Part two deals with ship design and operations. In particular, it examines cargo hazards and also discusses the raw materials involved in tank construction. This second part is also concerned with the effects of the Inter-Governmental Maritime Consultative Organisation's (IMCO) legislation on various aspects of ship design. Part three looks at the market situation for the basic chemical tanker cargoes and assesses how trade patterns, freight rates and the IMCO Code will affect fleet development. The main text is completed by means of a summary of the more important conclusions. A glossary of chemical technology terms plus a short select bibliography are also included. The following material constitutes the appendices which enlarge upon the information in the report: 1973 Marine Pollution Convention pollution categories; list of chemicals to which the IMCO Code does not apply; and the 1973 convention pollution discharge requirements. Further supplementary information is presented in the form of charts, diagrams and tables, including ship design and construction layouts and a cargo compatibility chart. Tighter international regulation together with intensifying environmental awareness have made the subject of chemical carriage of increasing concern to many in government, industry, science and technology and shipping. To all of these, this report will provide a coherent and up to date survey.

Government sales

Ministry of Defence Furniture

13 October 1976

Location
Regional Depot RAOC, Morton-on-Lugg, Hereford

Auctioneers
Russell Baldwin and Bright, 19/21 King Street, Hereford HR4 9DB (tel. 0432 55441)

16 October 1976

Location
Roman Way Camp, Mersea Road, Colchester, Essex

Auctioneers
Fenn Wright Garrod Turner, 146 High Street, Colchester CO1 1PW (tel. 0206 46161)

20 October 1976

Location
Ordnance Support Unit RAOC, Chart Road, Ashford, Kent

Auctioneers
Fuller Horsey Sons and Cassell, 52 Bow Lane, London EC4 9ET (tel. 01-248 7954)

The above three sales each comprise approximately 600 lots of household furniture and effects which will be sold as single items or in small quantities for the benefit of personal buyers.

Catalogues which give details of the lots, conditions of sale, viewing times, etc., are available from the appropriate auctioneers from two weeks before and up to the day of the sale, price 20p postage and packing 10p extra (postal orders only).

Wembley Auction Sales 1975/76

5 October 1976

View Days:	Day preceding and morning of sale
Location:	Department of the Environment Property Services Agency Supplies Store India Pavilion Exhibition Grounds Wembley, Middx. Tel. 01-903 2508
Description of Goods:	Office and Miscellaneous Furniture Engineering, Electrical, Canteen, Domestic and Other Equipment
Auctioneers:	Messrs. Fuller, Horsey, Sons and Cassell 52 Bow Lane London EC4M 9ET Tel. 01-248 7954
Catalogue:	Direct from the auctioneer price 10p each

Potential buyers are advised to refer to the official catalogue available direct from the auctioneers price 10p.

ENCIRCLE TI 216 ON PAGE 62 FOR FURTHER INFORMATION

The British hovercraft industry

Years of growth

By John Rapson, technical director, Hovercraft Development Ltd

Despite its comparative youth in the transport field, the British hovercraft industry has expanded since 1959 and grown in a number of different and interesting directions. Today it offers a wide variety of products ranging from large passenger- and vehicle-carrying designs suitable for cross-Channel operation to small industrial hoverpallets for moving equipment around factories. New applications for the hovercraft principle are also being found and throughout the world the advantages of the hovercraft are being recognised in the transport and materials handling fields.

The British hovercraft industry comprises three major areas of activity: the manufacture of large self-propelled hovercraft for civil, para-military and defence roles; the design and construction of simple but effective industrial hoverplatforms or devices; and the production of small hovercraft having seating capacities for up to twelve persons. In addition to these the British hovercraft industry also uses important component suppliers such as Rolls-Royce, Avon Rubber and Hawker Siddeley Dynamics and Dowty Rotol.

Although invaluable worldwide operating experience has been gained with the British Hovercraft Corporation's SR.N6, SR.N5, SR.N4 and BH.7 designs and Hovermarine Transport's HM.2 Mk 3 sidewall hovercraft, efforts are now underway to produce new designs to meet the latest requirements of customers at home and abroad. BHC has announced its intention to improve further the efficiency of propulsion and lift systems on its 200-ton SR.N4 design, five of which are currently in service across the English Channel. Hovermarine Transport has recently completed the prototype HM.2 Mk 4 craft which is able to carry up to 92 passengers, and has under construction the much larger HM.5 design which will be able to accommodate up to 200 persons. Vosper Thornycroft, the well-known shipbuilder, is pursuing a range of options and has under evaluation an advanced military hovercraft design known as the VT.2.

With many of these developments there are links with Hovercraft Development Ltd (HDL), the National Research Development Corporation's subsidiary set up in 1959 to promote the hovercraft concept and exploit the patents.

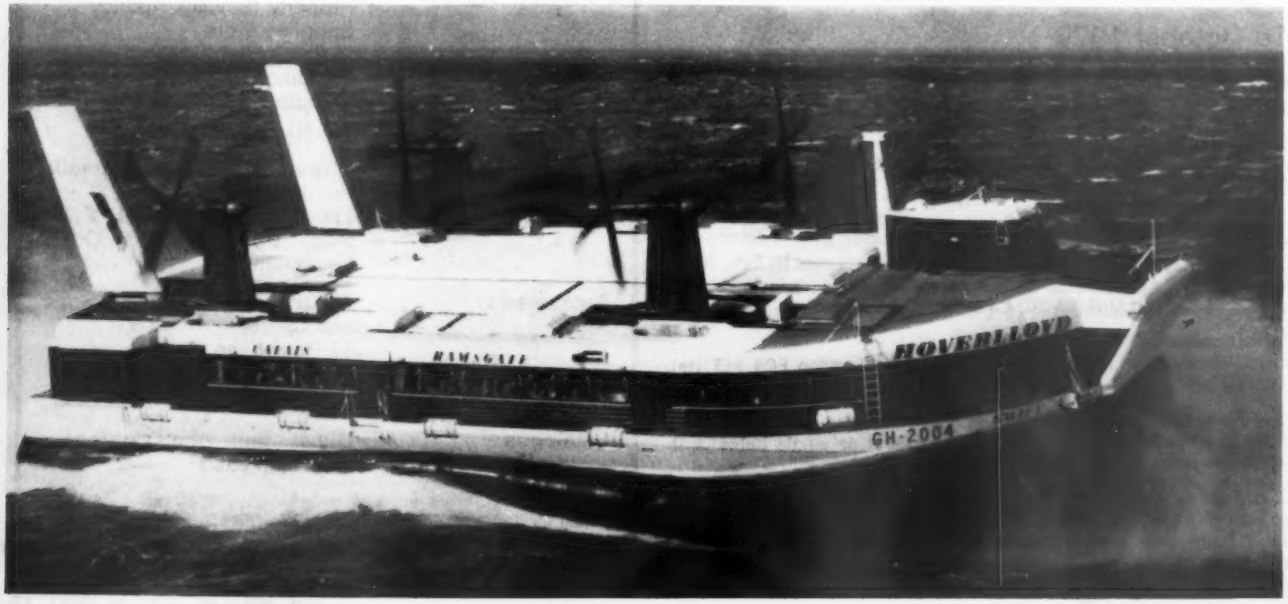
With the British hovercraft industry's impressive record of export achievements, its ability to produce suitable craft to meet overseas customers' requirements is seen to be of vital importance. To assist the companies in seizing these opportunities HDL has, in a number of instances, advanced funds for new hovercraft projects which will enhance the range of products which can be offered to home and overseas customers. Craft included among those in which HDL has provided financial assistance are the SR.N4, the VT.1 and the HM.2 Mk 3. More recently HDL has assisted in the Hovermarine HM.5, the Pindair 'Skima 12' and the Air Vehicles 'AV Tiger'.

The industrial applications of the hovercraft principle have developed widely and constitute one of the most exciting areas of the British hovercraft industry. Load-carrying hovertrailers and large hovertransporters are now being employed for equipment movements in areas where normal transportation is impossible or would be extremely expensive, and many major engineering contractors are now well aware of the versatility provided by such devices in new port construction schemes and other projects in developing countries where facilities may be non-existent or very limited. This situation was hardly visualised when the early developments were taking place within the hovercraft industry some 16 years ago.

Smaller sizes of hovercraft are being increasingly used in such tasks as personnel transport, pollution monitoring of river estuaries and coastlines, experimental spraying of pest breeding areas and hydrographic surveys. In many of these tasks the typical four-seater hovercraft is required to traverse marshland, tidal mud-flats and shallow water. With their versatility and low costs such hovercraft can be useful additions to the vehicles and launches employed in a wide range of support duties, particularly in developing countries. Military applications of small hovercraft also show useful advantages over more conventional equipment.

The lead which the British companies have over their foreign

The SR.N4 Mark 2 travelling across the channel at speed in moderate weather conditions.



competitors in the hovercraft field is jealously guarded, particularly since it is recognised that the British hovercraft industry is at the stage when significant improvements can be incorporated in the next generation of hovercraft. British hovercraft designers can confidently predict reductions in total craft operating costs of 50 per cent, a situation which illustrates the infancy of the technology and the good position in which the British manufacturers are in to exploit their experience. Its comprehensive collection of products – from single seat recreational hovercraft to large hovertransporters weighing several hundred tons – means that the British hovercraft industry is well aware of the enormous potential offered for exports and, with the encouragement of HDL through financial and technical assistance, the British companies seem certain to achieve success.

The big three

Three companies dominate the British industry. John Bentley looks briefly at each firm and outlines their achievements and future plans

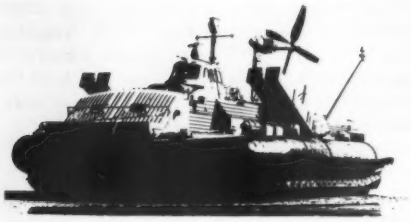
Hovercraft to many people mean only the large craft which ferry people and cars between Britain and France and the majority of tourists who queue to use the Channel service would be surprised to learn that there are more than a dozen hovercraft manufacturers in Britain today. The companies range from one-man concerns to substantial subsidiaries of publicly quoted corporations and supply a steadily expanding market with craft which will carry passengers and goods over land and water – in one case water only – at speeds which can only be rivalled by hydrofoils.

The theoretical advantages of amphibious hovercraft are speed and the ability to operate across water and land without using conventional dock terminal facilities. The speed factor is an unassailable advantage, carrying with it the ability to operate across shallow water and sand bars in order to shorten a traditional sea route, especially where an estuary is involved. The terminal facilities are slightly less advantageous than would appear at first sight because with any substantial service the operator would need to construct hard standings for the craft to rest on while passengers and cars are loaded, a maintenance base, office, reception and customs area. So that while in theory a hovercraft is perfectly capable of being operated directly off a beach – as Hovertravel has done at Southsea for the past ten years – an international scheduled service would need some terminal facilities. Their cost, however, would be nothing like as much as conventional ship docking facilities. The comparison is important when one considers that hovercraft are having their greatest impact in those areas where such traditional facilities do not now exist.

The disadvantages of hovercraft can be summed up as cost and noise. Both of these areas are being tackled energetically and both have been the subject of development grants from the British government over the past few years. Much of the noise is caused by the air propeller tip speed and measures to cut this down have dramatically decreased the outside noise level. On the cost side, hovercraft are considerably cheaper than ships, more expensive per hour to operate, but have a higher carrying capacity per hour, faster journey times and turn-rounds, which in turn provide greater passenger appeal.

Quite separate as a class of vessel is the sidewall hovercraft which is not amphibious. It has a shallow draught when raised up on its air cushion and can travel faster than displacement vessels. Development of this type of craft in Britain has been chequered, but is now going ahead strongly and in the United States the development of very large sidewall hovercraft for military purposes has received substantial backing in the past five years.

The SR.N6 Mark 6 twin-propeller craft, which is quiet and highly manoeuvrable.



The big three, continued

The 'big three' British manufacturers are the British Hovercraft Corporation (BHC), which is a wholly-owned subsidiary of Westland Aircraft, Vosper Thornycroft, the well-known shipbuilder, and Hovermarine Transport Ltd (HTL) which is a wholly-owned subsidiary of the US-based Hovermarine Corporation Inc.

British Hovercraft Corporation

BHC, based at East Cowes, Isle of Wight, is the successor company to the early names in hovercraft of the sixties – Westland, Vickers and Saunders Roe – and it produces a wide range of amphibious craft which have proved their performance all over the world. It is easily forgotten that early models of present BHC craft operated in the mid-sixties in the Canadian Arctic, Borneo, Vietnam, the Falkland Islands and South America. Their successors still do operate in some of these areas, but there have been three main lines of development which have contributed to BHC's largely unsung success.

Starting with the smaller craft; the SR.N6, versions of which ply half-hourly between the mainland and the Isle of Wight all year round carrying between 38 and 56 passengers depending on the type, has so far sold more than 50 units. In the civil version they operate in the UK, Canada and the Far East. Military craft also operate in the UK and in several Middle Eastern countries.

The latest SR.N6 development is the Mk 6 which has twin propellers which give it a very low outside noise profile – useful both for civil and military users and the Mk 6 craft is expected to sell widely in the Middle East where many countries have a requirement for a fast, quiet offshore patrol craft for defensive, counter-insurgency or general para-military patrol duties.

The next craft in the size scale is the 60-ton BH.7 which is a basically military craft for either missile launching, fast patrol or logistics duties. Six of these craft are now in service with the Imperial Iranian Navy, which incidentally operates the largest military hovercraft fleet in the world.

The Royal Navy also operates the BH.7 from its trials unit base at Lee-on-the-Solent and recent developments in British defence thinking may mean an expansion of the RN's use of hovercraft, particularly in the mine counter-measures role. If this were to occur it would give a tremendous boost to export prospects for BHC because many overseas navies prefer to buy equipment which is in use by the selling nation's own forces. The problem in the past has been that in Britain's well-charted coastal waters there has been no strong motive to use a new form of transport for a particular job when so many conventional alternatives were available. Now it may well be that potential enemy technology demands new means of countering the threat. Certainly the situation off Iran, which ordered its first craft 10 years ago, called for special measures. The waters around Iran are shallow and relatively uncharted and there are few conventional ports accessible to areas of possible defensive operations. It is in these special situations where the hovercraft has shown its superiority in the past and is likely to do so in the future as more nations develop their own military and civil transport networks.

The largest craft in the BHC line is the cross-Channel SR.N4. It was built and put into service in 1968 with very little time spent on development trials and its first two years were dogged by cancellations because of mechanical and weather difficulties. These problems have been doggedly tackled by BHC, Rolls-Royce, the engine manufacturers and the two operators, British Rail Hovercraft (Seaspeed) and Hoverlloyd.

Seaspeed's two craft will be returning to Cowes within the next two years in order to be stretched to Mk 3 standard, and Hoverlloyd already operates three Mk 2 craft with a fourth being built now. Since the early days the SR.N4 has proved that it can be stretched sideways to increase car-carrying capacity, and the Mk 3 version will be a standard N4 literally cut into two pieces so that an extra section can be added amidships to give greater length. In the past six years BHC has carried out various improvements in the detailed design of the skirts and other components so that reliability levels of the craft are now comparable with ships.

The proof of the pudding was given last month when Seaspeed announced that the hovercraft's share of the short-sea-route traffic across the Channel had reached 34 per cent for vehicles and 30 per cent for passengers. In six years since its inception the hovercraft has clearly made a significant dent in the established pattern of cross-Channel journeys.

But BHC is not content to rest on its laurels just yet. There are plans in the pipeline for a 500-passenger craft, the BH.88, which will incorporate all the experience which the company has gained on the N4 and which will carry more people over longer distances. The company's aim, through a programme of research and development, is to halve the power requirement of all the craft in the range. This they expect to do by improving lift-fan efficiency; making a 35 per cent reduction in skirt drag, and a 15 per cent improvement in propulsion efficiency.

If BHC were to do this it would certainly mean cheaper operating costs per passenger-mile, although some of the advantage would probably be taken up by carrying more fuel and thus extending the craft's range. Extended range would in turn widen the market in which the craft could be sold.

That, then is one of the aspects of BHC's future. The company itself is cushioned against fluctuations in the hovercraft industry by undertaking contract work on helicopter parts for its parent company, by running tests in its own tanks and experimental laboratories for outside firms, and by making flexible tanks and containers. In addition two useful contracts have recently been concluded with the Russian government, which is being assisted in the design of large fans, and perhaps more important in the long term, a series of contracts on the US Navy's surface effect ship programme, for which BHC is designing and fabricating skirts.

Vosper Thornycroft

It was a natural move for the old-established but thoroughly modern shipbuilder Vosper Thornycroft to take a stake in hovercraft which it first did in 1969 when it built the first of two non-amphibious fully skirted craft designated the VT1. This craft had an all-round flexible skirt of the HDL-type, claimed to give better ride and wear characteristics than other skirts then in existence, but was propelled by two water propellers which gave it very good manoeuvrability and quietness. The water propellers were mounted on skegs in such a way as to allow the craft to beach itself with the bow on dry land and the propellers in the water – an excellent idea in theory but one which did not really catch on. The VT1 programme was then changed and the company is now operating the VT2, which has a similar hull and skirt arrangement to that of VT1, but the craft is now fully amphibious, being propelled by two very large ducted fans. Placing a duct around a fan or propeller gives it greater aerodynamic (and therefore thrust) efficiency and of course reduces the ambient noise levels. The VT2 programme is progressing slowly but surely, and Vosper, with its tradition of supplying navies throughout the world with high speed surface craft is well placed to market the VT2 as a patrol craft armed conventionally or with missiles and torpedoes, or as a logistics and troop carrier.

Hovermarine Transport Ltd

Based at Woolston, Southampton, HTL manufactures and sells high speed marine ferries which derive their speed capability from the air cushion which supports the craft when it is moving. The cushion is contained by rigid sidewalls on each side of the craft, and by flexible seals (skirts) at bow and stern, rather like a very shallow draught catamaran which is lifted out of the water by an air cushion. Because of the sidewalls the craft are not amphibious and can be driven by conventional water propellers. Following on from that, the people who drive them can be fully marine-trained and converted on to HM.2 craft with a minimum of training, whereas the amphibious air-propelled hovercraft driver generally needs both marine and aviation experience and then a course on hovercraft driving because

Above, the first HM.2 to be run in Hong Kong by the Hong Kong Yaumati Ferry Company. The service is now carrying more than 1,000 passengers each day. Right, an artist's impression of the HM.5 which will carry 200 passengers at a speed of 40 knots.

of the distinctive nature of air-driven hovercraft controllability.

The sidewall craft, as HTL points out, is therefore much more easily integrated into existing fleets of marine craft by ferry operators than its amphibious counterpart. It can use the same berthing facilities, can cut some corners on routes because of its shallow draught when on cushion, but is essentially a fast craft.

HTL has sold more than 40 HM.2 60-seat craft, which are powered by three diesel engines, and they are being operated in locations all over the world. At the moment in Hong Kong 1,000 passengers are being carried each day on four HM.2 Mk 3 craft, and a new version, the Mk 4 will be arriving soon which will give the company, Hong Kong and Yaumati Ferry Co, a 92-passenger capacity. The Mk 4 craft is in fact a stretched version of the HM.2 Mk 3, with different engines, and has been developed partly as a result of the requirement of the Hong Kong company. Other operations are running in the Philippines, where two craft of a four-craft order are in service; in New York harbour; Rio de Janeiro, which has three craft; Venezuela, also three craft; Lake Titicaca, where the whole hovercraft had to be transported over the Andes before it could be launched; the Channel Islands, and Portugal, where four craft have been operating since 1971.

Another version of the HM.2, which has a general-purpose work area in the cabin instead of passenger seats, has been carrying out successful survey operations in the Scheldt Estuary, Belgium, where, the company reports, because it is surveying the seabed at 20kt, twice the area has been covered in the hovercraft survey than would have been possible in the same time by conventional ship.

Next year, however, should see the culmination of one of the dreams of staff who have been with HTL from the beginning, the launching of the first HM.5 craft, which will be a 200-seat, 40kt sidewall craft which will have a computer-controlled ride-stabilisation system to ensure a stable comfortable ride in heavy seas. It is a scaled up version of the HM.2 concept, based on experience gained from 100,000 commercial operating hours, and will provide a considerably broader market for the company. Part of the funding for this new craft is being provided by NRDC via its subsidiary, Hovercraft Development Ltd under whose patents most manufacturers are licensed.

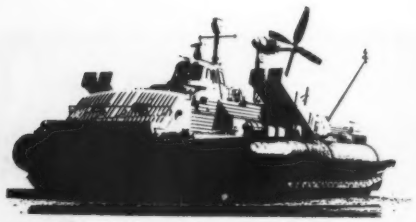
When I visited the factory last month the moulds for the HM.5 hull were just being separated from the plug. Model testing to discover the optimum bow skirt arrangement and forward hull shape was carried out in NPL's Hythe test tank (now the National Maritime Institute's) and the company reports that the tests on the definitive model exceeded design specification. The craft is easily expected to travel at 30kt in 1-metre significant wave-height, and will have a top speed of 40kt in calm water. Calm-water speed of the HM.2 is approximately 33kt.

Government help

The Department of Industry has provided assistance in the past for many projects. Important among those which affect craft currently in operation were those parts of the terminal special assistance grant which helped Vosper Thorneycroft to convert the prototype VT1 into the VT2; helped BHC to develop an improved SR.N4, and develop the SR.N6 Mark 6. Earlier the department also purchased the HM.2 from Hovermarine for use as a development craft.

That then is a summary of the position of the big three UK hovercraft manufacturers. Until now they have had the field, certainly the commercial field, largely to themselves, but next year the first of a new range of French hovercraft is due to appear on the Channel routes and for many years several American manufacturers have been designing and manufacturing craft for the US Navy. The latest estimate of the size of the US Navy's first production craft is 3,000 tons – 10 times the size of the SR.N4, and it will carry, if the plans go through, anti-submarine helicopters and aircraft, together with a variety of missiles at an open-sea speed of 80kt.

Significantly, BHC have a substantial sub-contract with one of the major American builders. Britain has more hovercraft technological expertise than any other country at the moment and through the HDL licensing system, the patents held by HDL and the other British companies, that expertise may well prove to be a major invisible export in the next decade – in addition to the 'visibles' in evidence on short-sea ferry routes around the globe.



Industrial aspects

by Neil MacDonald

With its achievements in ferrying passengers and cars already well known, the hovercraft is rapidly being applied to other less glamorous jobs where its versatility provides scope for tasks in the civil engineering, construction and industrial sectors to be undertaken. This widening of the use of the hovercraft and its technology has identified new and unexpected areas of potential and in some of these there are indications that with increasing worldwide recognition, the hovercraft – in its various forms – will become the standard form of equipment.

One of the most unusual but impressive applications of hovercraft technology is in the relocation of large storage tanks. These tanks are normally designed to hold large quantities of liquids, powders or gases and are a familiar sight in most refineries or chemical complexes. With capacity requirements at these facilities constantly changing there is a need from time to time for some of these storage tanks to be replaced or relocated elsewhere within the tank farm.

Using air-cushion technology derived from marine hovercraft this new way of relocating such tanks has now been accepted as a simple and highly effective method. After the storage tank to be moved is fitted with a temporary flexible skirt around its base, and cables are attached to the tank to enable it to be towed. Air blowers feed pressurised air into the skirt. Gradually the tank lifts clear of the foundations and by towing it with a light vehicle the storage tank can be rotated or steered towards its new resting place.

The largest tank to be moved in this manner to date has been a 700-ton tank located at Pauillac near Bordeaux in France. This was undertaken by the British company, Mears Construction Ltd, which has been responsible for many other tank moves in Britain and throughout Europe. Programmes for major tank relocations using the hovercraft method are currently underway in the USA and Japan.

Throughout the civil engineering field there are many tasks which need to be accomplished with the minimum of cost and interference with other activities, and sometimes the timescale for the scheme is so critical that work has to begin before the site is properly prepared. This can create a host of problems, not the least of which is site access. It is in this area that the hovertrailer has come into its own. Basically a 'dumb barge' which is fitted with a pair of special wheels (for directional guidance on side slopes), a hovercraft skirt and its air supply, the hovertrailer is winched or towed across terrain which is impassable or hazardous for other forms of transport.

One example of hovertrailer use occurred in Holand where the Dutch authorities planned to lay a new electricity transmission line across some newly reclaimed land. They examined the vehicles which were available to do the job and decided that because of the severity of the terrain there was no vehicle apart from the hovercraft which could move across the land under load. As a result they employed the hovertrailer to transport a number of heavy cable reels along the course of the transmission line and were able to complete the task easily and quickly.

Made by UBM Hover Systems Ltd of Southampton, hovertrailers are offered for payloads of between 10 and 20 tons, with special designs available to cope with larger or heavier loads. The company has built up its experience in operations over different types of terrain and has sold hovertrailers to customers in several areas of the world including tropical regions.

Massive new port construction projects are underway in a number of developing countries around the world and it is hoped that when these are completed they will then be able to handle the large throughputs of cargo which have accompanied trade growth. In the meantime, however, several ports in West Africa and the Middle East are suffering from port congestion and have large numbers of ships lying off their coasts awaiting discharge. One solution which has been under study by the authorities and governments who are facing these problems has been the use of special hoverplatforms which would operate in a ship-to-shore role, ferrying discharged cargo either direct from ship to hoverplatform or from the unloading pontoons offshore to shore-based handling sites on the mainland. Working with winch lines or outboard motors, large hoverplatforms, able to carry many hundreds of tons of cargo at a time, would quickly and easily resolve the problem. The hoverplatforms would operate to the shore or beachline and would require virtually no permanent facilities except service roads to guide away the discharged cargo on lorries. Playing a major part in the promotion of such schemes is Mackace Hoversystems Ltd, a Southampton company which has been actively involved in hover transport schemes in the Middle East and North America.

Mackace offers a range of hoverplatforms with payloads from 30 tons upwards and uses an interesting modular construction technique for these based upon Storey Uniflotes which enable the platform to be redefined to carry larger or smaller payloads. As with the hovertrailers, these platforms are not normally self-propelled and principally rely upon winching although Mackley Ace has under development a new self-propulsion system. This will enable hoverplatforms (and perhaps hovertrailers) to be completely independent of external sources of propulsion and guidance.

Pioneering the development of many of the industrial devices has been another Southampton-based company, Air Cushion Equipment Ltd, which originally had a direct interest in the hovertrailer and hoverplatform business of UBM and Mackace. The latter two companies being complementary to each other.

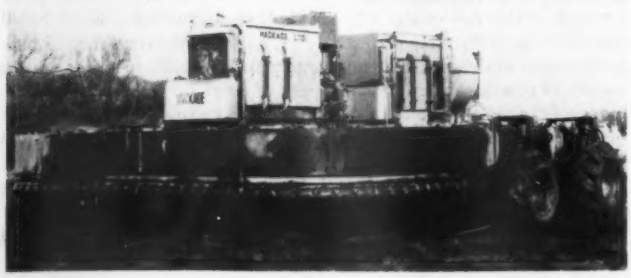
An area of the industrial hovercraft scene rarely publicised is the medical hoverbed which is used by hospitals for the treatment of patients with severe burns. So far two hoverbed units are understood to be operational in specialised hospitals in the United Kingdom and great interest has apparently been shown by many overseas hospitals. Further developments in the hoverbed field have involved special low-loss units for geriatric patients.

Although still awaiting firm orders, the aircraft recovery system which is based upon the use of hoverplatforms has aroused interest in many quarters. Designed to enable crashed or disabled aircraft to be quickly removed from a runway or recovered from soft ground without secondary damage, the system employs a number of flat bed hoverplatforms which are positioned under the wings of the aircraft and the fuselage. These are linked together with the space between the platforms and the aircraft being taken up with inflatable air bags. Cables are attached to the aircraft, the hoverplatforms' air blowers are started and the aircraft is hovered over the ground to a location where it can be repaired or salvaged. In cases where an aircraft suffers undercarriage failure on the main runway of a major airport, the recovery system could be quickly put into action and the aircraft cleared off the runway before major diversions of traffic become necessary.

Manufactured by UBM Hover Systems, the aircraft recovery system kit is claimed to be capable of handling virtually any aircraft up to the size and weight of a Boeing 747 and trials have been undertaken for the British Airports Authority and the Royal Air Force. However, it seems that until some major emergency arises the system may have to wait a little longer before gaining a customer.

As in the field of passenger and freight transport the industrial applications of the hovercraft principle clearly have a wide number of varied applications. The problem seems to be more one of identifying problem markets and overcoming traditional attitudes than developing air cushion technology to meet them.

The Mackace self-propelled amphibious hover-platform.



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Please indicate whether your application will be in respect of exports or technology or both.

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The closing date for return of applications is 31 October, 1976.

ENCIRCLE TI 214 ON PAGE 62 FOR FURTHER INFORMATION

European community news

UK welcomes 200-mile fisheries limit but finds 12-mile coastal belt 'wholly unacceptable'

Proposals from the EEC commission that the community should decide together on a 200-mile fisheries limit from 1 January next year, were welcomed by the Foreign and Commonwealth Office in a statement following publication of the commission's proposals on 23 September.

Pointing out that the full text of the commission's communication had not yet been received in London and would require further careful study before a considered reaction could be given, the FCO statement stressed that the new document was a statement of the commission's thinking and not a formal legislative proposal.

The UK had for some time urged that early extension of fishing limits by EEC coastal states was essential to safeguard fishery resources and to provide a proper basis for the revision of the common fisheries policy, for dealing with third countries who were currently fishing within what would be the fishing limits of the community coastal states, and for the future planning of the UK's fishing industry, the statement continued. Mr Crosland had already made clear that the UK needed to be able to make an extension on 1 January next year.

The UK's hope was that member states would act together. However, the British government could not afford to see the fish round the shores of the UK squandered because of an unreasonable delay.

Commission's proposals for a common fisheries policy

The commission's proposals for the revision of the common fisheries policy contain the following main features:

Member states should extend their fishing limits to 200-miles in the North Sea and north Atlantic area on 1 January 1977;

Negotiations should be opened with third countries to agree rights of access for community fishermen in their waters and for their fishing in community waters, or for the phasing out of such fishing;

The establishment of a 12-mile zone around community countries reserved for inshore fisherman;

The maintenance of other member states' traditional fishing rights within the 12-mile zone;

Introduction of community catch quotas coupled with other conservation measures. It is proposed that there will be a reserve stock established for the main species of fish which will be used for the purpose of allocating a specific additional quota to fishermen in certain regions of Ireland and the north of the UK;

Adoption of a licence system for fishing boats of member states to allow strict control of EEC waters;

Allocation of 400 million units of account over five years for streamlining and modernising the fishing industry.

Internal fisheries regime

Commenting on the commission's proposals on reform of the communities internal fisheries regime, or common fisheries policy, (see below) the statement said that the commission had addressed themselves to some key issues; on one hand coastal belts and quotas, and on the other the conservation and control arrangements which were essential to a solution. The results were mixed. Some recognition had been given to the concept of priority to coastal fishermen. But their suggestions for coastal arrangements fell far short of the needs of the UK and were 'wholly unacceptable'. The UK's position on the issue of coastal belts and on the treatment of traditional fishery rights within them was set out by Roy Hattersley in the EEC foreign affairs council on 4 May this year.

Describing the proposals for coastal arrangements as 'extremely disappointing' the statement noted that recognition had been given to the need to take account of regional considerations. It would be necessary to evaluate very carefully the suggestion that priority be given to the fishermen of the northern part of the UK and of Ireland. The problems of the UK industry were not, of course, confined to the north.

The commission's suggestions for quotas and other conservation measures recognised the importance of conservation, but would need considerable elaboration. The UK noted the attention paid to enforcement. The government had consistently made clear that any community fishing regime must ensure sound and enforceable conservation measures in order to protect fish stocks, of which a high proportion would be found within the UK's fishery limits. It was vital that the UK should take advantage of the extension of fisheries limits to put into operation effective and binding conservation measures, and that the UK greatly improved on the unsatisfactory arrangements in the North East Atlantic Fisheries Commission. Obviously a great deal more work needed to be done on this. The government's and the industry's attitude towards proposals for revision of the CFP would be very considerably influenced by the prospect of securing adequate measures of conservation and enforcement.

Negotiations with other countries

Mandates for negotiations would need very careful study. The most urgent task was to ensure that the British fleet could continue to fish off Iceland after 1 December. The community also needed to reach agreement with a number of other countries.

Canada would extend her limits on 1 January 1977 and agreement was necessary with her. The United States would follow suit on 1 March. Agreements would be necessary also with Norway and the Faroes at a fairly early stage; and there would have to be negotiations with other countries such as the Soviet Union.

The UK hoped for a decision, at the next meeting of EEC foreign ministers on 18/19 October, on the extension of fishing limits in member states and on the most urgent of the mandates for negotiation. The UK would be following up the other aspects of the proposals as quickly as possible. Finally the statement said that the success of the community in dealing with third countries would be a test of its ability to create an equitable common fisheries policy.

Meeting of foreign ministers

The commission's proposals followed the meeting of EEC foreign ministers in Brussels on 18/19 October, when Anthony Crosland, Secretary of State at the Foreign and Commonwealth Office and other ministers had told the council that it was 'vitally urgent for the community to reach a decision'.

Mr Crosland said that he would much prefer that the community would act together and that from the beginning of next year legislation was in preparation for a British extension. He indicated that if necessary Britain was prepared to extend her fishing limits unilaterally.

He had pointed to the current heavy fishing by non-EEC members off Devon and Cornwall as an example of the threat to community sources that could only be averted by such an extension. He added that there had been no dissension in the council on the importance and the urgency of declaring the 200-mile limit.

Britain, he said, attached great importance to urgent action on two other related fisheries matters: the finalising of mandates for negotiations on reciprocal fishing rights with Norway and Iceland, and the revision of the common fisheries policy which will govern fishing in the EEC's 200-mile zone. Britain had stated that it would require a coastal band around Britain, varying between 12 and 50 miles, reserved for British fishermen. He stressed that negotiations with Iceland were particularly urgent as the UK's current agreement with Iceland was due to expire on 1 December.

Protocols to EEC/Portugal agreement signed

An additional protocol to the EEC/Portugal free trade agreement and a financial protocol were signed by foreign ministers in Brussels on 20 September.

Both protocols are the result of negotiations which have been taking place between the two parties since the spring of this year, under article 35 – the so-called 'evolutive' clause – of the 22 July 1972 free trade agreement between the community and Portugal. This is the first time that this clause which forms part of each of the agreements concluded between the community and the Efta countries, has been applied.

The protocols are designed to assist Portugal to overcome some of the trading, economic and social difficulties which have arisen since the political changes of April 1974.

The additional protocol supplements and expands the 1972 agreement, making improvements to the provisions covering trade, industry and agriculture. It also extends the agreement to new sectors, establishing limited reciprocal treatment in the fields of social security and labour and providing for financial, industrial and technological co-operation. The financial protocol improves upon the level of financial assistance granted as emergency aid by the council on 7 October last year and sets down certain guidelines for its management.

An interim agreement has been concluded to implement the commercial provisions of the additional protocol at the earliest possible date, without waiting for the entry into force of the full additional protocol which has to be ratified by both parties. These provisions will now enter into force on 1 November this year.

Commercial provisions

The additional protocol provides for the early suspension of community customs duties on almost all industrial products (ie those classified within chapters 25-99 of the Brussels nomenclature) originating in Portugal. To this end, the community has already taken unilateral action to permit the products in question to be imported into the community free of customs duties from 1 July 1976.

The protocol also makes a number of modifications to the ceiling and quota arrangements contained in the 1972 agreement. The 1976 duty free ceilings on certain Portuguese textiles imported into the community have been raised by an additional 5 per cent on the 1975 levels, while Portugal has undertaken to introduce the necessary measures to ensure that its exports of sensitive textile products to the UK do not exceed defined limits.

The community has also opened zero duty quotas for certain types of paper (principally Kraftliner paper) imported into the Six and Ireland for the period 1 January 1976 to 31 December 1983 and extended and widened the paper quotas applicable to the UK and Denmark.

In order to offer Portugal some assistance in the recovery of her manufacturing base, the community has agreed to a slowing down of the rate at which customs duties are progressively eliminated for a number of items already benefiting from limited protection under the 1972 agreement. Duty free entry for these products will be reached on 1 January 1985 instead of 1 January 1980.

The protection granted Portugal's emerging industries under the 1972 agreement has been improved: the joint committee provided for under the agreement may authorise Portugal to increase or re-introduce customs duties of up to 20 per cent *ad valorem* on products of a total value exceeding the previous limit of 10 per cent of the total value of Portuguese imports during 1970. The earlier option has not been exercised to date.

Similar protection will now also be afforded existing Portuguese industries which have suffered a severe set-back since the Portuguese revolution. A number of products have been identified for which Portugal may apply to increase or re-introduce customs duties to a maximum of 20 per cent *ad valorem* provided the necessary consultation has taken place. Provision is made for the community to be notified in advance and a period of up to 28 days allowed for goods in transit. Customs duties introduced in this way will be phased out according to a timetable ending on 1 January 1985.

A substantial reduction in the customs duties on imports into the community is provided for on a number of fish products and horticultural products.

For wines originating in Portugal, the tariff quota for Port wines in bottles has been increased from 20,000 hl to 35,000 hl, while the quota for Port in bulk has been reduced from 285,000 hl to 280,000 hl and for Madeira, Muscatel and Setubal wines separate tariff quotas have been opened for products in bulk and bottled wines, combined with 60 per cent tariff reduction on bottled wines and 50 per cent on bulk wines.

Social security provisions

A fundamental innovation compared with the 1972 agreement is that the additional protocol provides for co-operation on social security and labour as well as financial, industrial and technological co-operation.

The additional protocol stipulates that each member state shall grant workers of Portuguese nationality, employed in its territory treatment free from any discrimination based on nationality so far as conditions of work or remuneration are concerned. EEC nationals working in Portugal shall be entitled to similar treatment.

Portuguese workers and any members of their families living with them will also enjoy treatment free of any discrimination in the field of social security. Portuguese workers will be able to add together all periods of insurance, employment or residence completed in the various member states and will receive family allowances for members of their families who are resident in the community. Subject to certain conditions, they will also be able to transfer freely to Portugal any pensions or annuities paid to them in the field of social security. Similar provisions will apply also to nationals of member states in Portugal.

The joint committee is authorised to adopt the detailed rules for administrative co-operation in this area, but the provisions which it adopts must not affect any rights or obligations arising from bilateral agreements linking Portugal and the member states where those agreements provide for more favourable treatment for the beneficiaries.

The protocol makes provision for instituting co-operation with the aim of contributing to the economic and social development of Portugal and of strengthening existing links for the mutual benefit of the parties. This co-operation will be aimed at promoting measures likely to contribute to the development of Portugual's economy.

From the beginning of 1979 a review is to be made of the results of the agreement and any improvements which could be made.

Financial protocol

The financial protocol will apply for a period of five years from the entry into force of the protocol or from 1 January 1978, whichever is the later. It stipulates that the community will participate in the financing of projects designed to contribute to the economic and social development of Portugal.

For that purpose, an amount of up to 200 million European units of account may be committed in the form of loans from the EIB granted from its own resources on the terms set out in its statute. Of this amount, a maximum of 150 mua, will attract 3 per cent interest rate subsidies and priority claim to such subsidies will be given to Portuguese development agencies for financing small and medium-sized businesses, to the economic infrastructure including energy, and to agricultural development and the processing of agricultural and fishery products.

Further details of ceilings referred to above can be obtained from the Department of Trade's General Division (tel. 01-215 5491), details of tariffs are available from Overseas Tariffs and Regulations Section (OTAR) 01-248 5757 ext. 460 and inquirers on the EEC/Portugal free trade agreement should contact Commercial Regulations and Exports Division (CRE) (tel. 01-215 3728). General information on UK trade with Portugal can be obtained from CRE on 01-215 5340.

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Each week *Trade and Industry* publishes pictures illustrating Britain's export business. Companies with export successes are invited to send in the story with a photograph showing the goods in manufacture, ready for despatch, or, preferably, on arrival overseas. The story must, of course, reach us while it is still news. Send your export photographs to the Editor, *Trade and Industry*, Room 439, 1 Victoria Street, London SW1H 0ET.

European community new legislation

The legislation listed below has been published in the *Official Journal of the European Communities* as indicated against each item. The *Official Journal* is now published in English and copies should be obtained from HMSO. Information about the items listed, in so far as other member states' requirements are concerned, is available to British exporters from Department of Trade, Export Services and Promotions Division, Export House, 50 Ludgate Hill, London EC4M 7HU (tel. 01-248 5757, ext. 7174/482/408). Other information may be obtained from the reference point given at the end of the item.

Common agricultural policy

The texts of the following regulations which affect the various agricultural sectors in the EEC have been published in the *Official Journal of the European Communities.*

General. Regulation (EEC) 2219/76 amending regulation (EEC) 193/75 laying down common detailed rules for the application of the system of import and export licences and advance fixing certificates for agricultural products (*Official Journal* L250, 14 September 1976).

Cattle, beef and veal. Regulation (EEC) 2220/76 amending for the first time regulation (EEC) 2045/75 on special detailed rules for the application of the system of import licences and advance fixing certificates for beef and veal (*Official Journal* L250, 14 September 1976).

Regulation (EEC) 2221/76 establishing a list of the products of the beef and veal sector to which arrangements for the advance fixing of export refunds may apply (*Official Journal* L250, 14 September 1976).

Regulation (EEC) 2240/76 extending the period of validity of the arrangements for exceptional intervention measures in the beef and veal sector in certain regions of the community most affected by the drought, and extending those measures to Denmark (*Official Journal* L252, 16 September 1976).

Regulation (EEC) 2270/76 amending regulation (EEC) 1897/76 on the sale at prices fixed in advance of certain boned beef held by the intervention agencies (*Official Journal* L255, 18 September 1976).

Wine. Regulation (EEC) 2256/76 terminating private storage aid for table wine of the type R I (*Official Journal* L254, 17 September 1976).

Corrigenda. The *Official Journal* L251, 15 September 1976, contains the following correction to regulation (EEC) 1930/76 on the distillation of the by-products of wine-making (published in *Official Journal* L211, 5 August 1976):
Page 3, Article 9:
for: '. . . shall be paid a reduced rate. . .'
read: '. . . shall be subject to a reduced rate. . .'

Common customs tariff

Wine. The *Official Journal* L255, 18 September 1976, contains the following correction to regulation (EEC) 1165/76 amending regulation (EEC) 950/68 on the common customs tariff (published in *Official Journal* L135, 24 May 1976): Page 40, first entry, third column:
for: '19 (a) (b)'
read: '19 (a)'.

Milk and milk products. Regulation (EEC) 2243/76 amending regulation (EEC) 935/76 fixing the aid for skimmed milk for use as feed (*Official Journal* L252, 16 September 1976).

Cereals and rice. Corrigendum. The *Official Journal* L255, 18 September 1976, contains the following correction to regulation (EEC) 1862/76 amending regulation (EEC) 2742/75 on production refunds in the cereals and rice sectors (published in *Official Journal* L206, 31 July 1976):
Page 3, fourth indent of Article 5a (1) (a):
for: '. . . metric ton of potatoes . . .'
read: '. . . metric ton of potato starch . . .'.

ACP/Lomé convention

Corrigendum. The *Official Journal* L255, 18 September 1976, contains the following correction to regulation (EEC) 1654/76 on the conclusion of the agreements in the form of exchanges of letters on the guaranteed prices for cane sugar for 1976/77 between the EEC and the ACP countries and India (published in *Official Journal* L176, 1 July 1976):
Page 3, title and article 1; page 4, title:
for: '. . . Republic of Madagascar . . .',
read: '. . . Democratic Republic of Madagascar . . .'.

Applications for copies of the *Official Journal of the European Communities* containing the legislation referred to should be made to HMSO and not to the inquiry points given in the notices.

British marine radio console goes to Holland

Further orders for the new RMC 1000 marine radio console (shown below) have been won by Redifon Telecommunications of London – this time from the Verome Shipyard in Holland. Designed for rapid and easy operation of a ship's radio communications system, the Redifon RMC 1000 marine console contains all main and reserve equipment apart from the ship's main transmitter in a single compact unit, providing full control from the operator's chair.

EEC information

Free service for businessmen! The EEC Information Unit helps firms of all types and sizes by answering general questions about EEC membership and by guiding them where necessary to more specialised information sources.
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The unit's address is:
EEC Information Unit,
Department of Industry,
1 Victoria Street,
London SW1 H 0ET.
Tel. 01-215 4301 (six lines).

Signature for direct elections instrument

EEC foreign ministers signing the instrument for direct elections to the European parliament, in Brussels on 20 September. From left to right: West German foreign minister Hans Dietrich Genscher, Danish foreign trade minister Ivor Nørgaard, Belgian foreign minister Renaat Van Elslande and Britain's Secretary of State for Foreign and Commonwealth Affairs, Anthony Crosland. This instrument will bring into effect the decision of the council in July that the allocation of seats, totalling 410, will be divided to give the UK, France, Germany and Italy 81 seats each, the Netherlands 25, Belgium 24, Denmark 16, Ireland 15 and Luxembourg six. The intention of holding direct elections by 1978 was re-affirmed, but the polling date for the first elections is to be determined later by a unanimous decision at a future meeting of foreign ministers.

Ministers decide to consolidate community loan

Harold Lever, Chancellor of the Duchy of Lancaster, represented the UK at the economics/finance council meeting in Brussels on 20 September.

The council adopted a decision, the basis of which will enable the commission to change into a fixed-interest loan a proportion of the variable interest loans which it contracted on behalf of the community in March 1976.

The operation comprises firstly the repayment of $100 million, borrowed at variable rates, and secondly, a public issue at a fixed rate in the United States of notes to the same amount denominated in US dollars. The decision will be published shortly in the *Official Journal of the European Communities.*

Ministers also held an exchange of views on the economic situation in the community. Ministers from Italy, France, Denmark and the Netherlands, in particular, described developments in their national economies and indicated the economic policies they intended to follow in the next few months.

On the basis of a report from the chairman of the monetary committee, the council decided on the common position to be presented by its president Mr Duisenberg, the Netherlands finance minister, at the annual meeting of the International Monetary Fund in Manila this month.

Extended suspension of import duty for vegetables

As a result of the current shortage of vegetables within the EEC, rates of UK import duty, on fresh and chilled potatoes, white and red cabbage, peas and carrots imported from outside the community and from other member states are to be suspended for a further period from 1 October. The rates are at present totally suspended until 30 September.

The suspension on potatoes will last until 31 December 1976, while that on the remainder will last only until 31 October 1976.

The present total suspension of duty on celery (due to expire on 30 September) will be replaced by a reduction in the rates of duty from 1 to 31 October. The full rate will be 6.8 per cent and the Commonwealth rate 4.8 per cent. The duty on imports of celery from the other member states of the EEC will continue to be totally suspended.

Duties on animal feed suspended

Due to the current shortage of animal feeding stuffs within the EEC, UK duties on certain products of this kind have been totally suspended on imports from all sources with effect from 25 September 1976 until 31 March 1977*.

The tariff numbers and descriptions of the goods in question are set out in the table below. Any inquiries should be addressed to General Division, Department of Trade, tel: 01-215 3576.

Tariff heading (1)	Description (2)
07.05	Dried leguminous vegetables, shelled, whether or not skinned or split: B Other: i Peas (including chick peas) and beans (of the species Phasedus) ii Lentils iii Other
07.06	Manioc, arrowroot, salep, Jerusalem artichokes, sweet potatoes and other similar roots and tubers with high starch or inulin content, fresh or dried, whole or sliced; sago pith: B Other
12.08	Locust beans, fresh or dried, whether or not kibbled or ground, but not further prepared; fruit kernels and other vegetable products of a kind used primarily for human food, not falling within any other heading: A Locust beans
12.10	Mangolds, swedes, fodder roots; hay, lucerne, clover, sainfoin, forage kale, lupines, vetches and similar forage products: A Mangolds, swedes and other fodder roots
23.02	Bran, sharps and other residues derived from the sifting, milling or working of cereals or of leguminous vegetables: B Of leguminous vegetables
23.06	Products of vegetable origin of a kind used for animal food, not elsewhere specified or included: B Other
23.07	Sweetened forage; other preparations of a kind used in animal feeding: A Fish or marine mammal solubles C Other

* The Import Duties (Temporary Reductions and Exemptions) (No 2) Order 1976 will be published as SI 1976 No 1569/76.

More community news

Information on European community matters and about member states can often be found in other sections of *Trade and Industry*. For this week's additional news, turn to the following pages:

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Export services

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Overseas trade news

Anti-dumping investigations into men's and boys' suits and men's leather sandals

The Department of Trade has accepted for full investigation, applications under the Customs Duties (Dumping and Subsidies) Act 1969 against the alleged dumping of men's and boys' suits originating in Bulgaria, Czechoslovakia, the German Democratic Republic and East Berlin, Hungary, Poland and Romania, and against men's leather sandals originating in Czechoslovakia and Poland.

Statements of the applicants' cases will be available to interested parties who give an undertaking to treat the information contained in the statements in strict confidence. Any representations in connection with these applications should be submitted in writing not later than 18 October 1976. Such representations, in summarised form and without attribution to the source, may be passed to the applicants for comment. Those making representations should stipulate any particular matters which they do not wish to be disclosed.

Requests for copies of the statements together with an undertaking to treat the information in strict confidence, and any representations, should be sent in writing to General Division, Department of Trade, Kingsgate House, 66-74 Victoria Street, London SW1E 6SJ (for men's and boys' suits to room 325 and for men's leather sandals to room 344).

Inquiries: men's leather sandals: 01-215 3876; men's and boys' suits: 01-215 5503.

Seminar on US investment in UK

A one-day seminar on 'United States investment in the United Kingdom – the present and future' has been arranged by the American Chamber of Commerce. It will take place at Grosvenor House, Park Lane, London on Wednesday, 6 October.

In examining the question of current and future investment the chamber's board of directors decided that there were five main areas where there should be a dialogue between top British government officials and leading United States companies. These areas are: economic outlook; industrial relations; taxation and fiscal policy; investment outlook; energy policy.

The Prime Minister and the Secretary for State for Industry, Eric Varley, will participate personally in the programme. Ministers from the Treasury, Departments of Energy and Employment and senior officials from the Department of Trade and Inland Revenue will also take part. The programme will also include the general secretary of the TUC and the chairman of the CBI.

Further information about the seminar can be obtained from the American Chamber of Commerce (United Kingdom), 75 Brook Street, London W1Y 2EB, tel. 01-493 0381.

Exporters hear how to succeed in Japan

'For exporters to Japan, the time is ripe for the big push,' said Hamish McGhie, special adviser on Japan to the British Overseas Trade Board, at a seminar on how to succeed in Japan at the Confederation of British Industry which was attended by 120 senior executives from a wide range of industries.

Mr McGhie said, 'the Japanese economic recovery is well on the way and there is a new mood in Japanese government and business circles that imports of manufactured goods must be encouraged. The trend of our exports is already upwards. In July and August they increased by 18 and 28 per cent in value respectively.

'Our competitors are not asleep and if we can generate the effort and the capacity there are rich rewards to be had in the short, medium and long term. Scores of British exporters have already succeeded in the Japanese market.'

Mr McGhie emphasised that 'The BOTB's services are highly developed in Japan and can help to launch a firm's products and establish the newcomer in the market.'

ECGD guarantees loan by Morgan Grenfell

The Export Credits Guarantee Department has guaranteed a £12 million loan which Morgan Grenfell and Co Ltd, acting on behalf of Lloyds Bank Ltd, have made available to Bank Handlowy w Warszawie, Poland.

The loans will help finance a contract for a bearing manufacturing plant which GKN Contractors Ltd of Redditch have with Metalexport. The factory is scheduled for commissioning early in 1979.

New look for overseas trade

Overseas trade coverage in *Trade and Industry* now has a new look with a series of revised weekly sections:

Overseas trade news
Brings news of major international and economic developments, export credit details, official UK announcements for both importers and exporters, plus news of BOTB and chamber of commerce activities.

Country data
Country-by-country news of commercial developments, including tariff changes, overseas (see page 37).

Exhibitions
Coverage of British participation in overseas trade fairs from UK diplomatic representatives around the world (see page 41).

Export services
A new section dealing with developments in the British industries serving exporters (see page 44).

Trade marks exhibition opens in Geneva

An exhibition illustrating the evolution of British trade marks over the past 100 years opened in Hall XIV in the Palais des Nations in Geneva on 27 September, and will continue until 5 October.

The exhibition has been transferred from London to Geneva at the request of the World Intellectual Property Organisation to coincide with their general assembly meetings.

The exhibition shows that although trade marks have a history stretching back to the ancient societies of Egypt, Greece and Rome, it was the pressures resulting from the commercial and industrial expansion of the third quarter of the nineteenth century which led to the opening of the London Trade Marks Registry on 1 January 1876 providing the first national system for registering trade marks in Britain.

Delegates will see how changing fashions in trade mark designs reflect the developing tastes and attitudes of the British people during the last century.

The Dutch bought more than £3m per day worth of British goods in 1975
(only the U.S.A. and W. Germany bought more)

In 1976 trade with the Netherlands is already up by 17%

The Netherlands-British Chamber of Commerce is urgently searching for British companies wishing to export to the Netherlands

Please send name/address of your company and list of products/ services to be exported, brochures and price lists to:

The Netherlands-British Chamber of Commerce
307/308 High Holborn, London WC1V 7LS
London: 01-405 1358 Manchester: 061-834 5674

ENCIRCLE TI 212 ON PAGE 62 FOR FURTHER INFORMATION

T.T.M.S

IF

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22 Silver Street, Trowbridge
WILTSHIRE. BA14 8AE.
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Social Trends No. 6

Social Statistics are a vast topic; analysing the data available from the numerous sources can prove a formidable task. *Social Trends*, compiled by a team at the CSO from data supplied by all Government departments, is well established as the source of a comprehensive collection of major social and environmental statistics.

Social Trends No 6 is larger than ever, incorporating not only new tables and charts in the established sections but also a new section on households and families. The calendar of events is a continuing feature which summarises changes in law and other significant events which have influenced social patterns in recent years. The Social Commentary – another established feature – examines social class differences in British society.

£4.90 (by post £5.38)

Please send your requests for free lists of titles (specifying subject/s) to Her Majesty's Stationery Office, PM1A (ZTI), Atlantic House, Holborn Viaduct, London EC1P 1BN

HMSO Books can be bought from the Government Bookshops in London (post orders to PO Box 569, SE1 9NH), Edinburgh, Cardiff, Belfast, Manchester, Birmingham and Bristol or through booksellers. See Yellow Pages for your nearest stockist of Government publications.

HMSO BOOKS

British exports to Iran in 1975 were valued at nearly £500,000,000

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Walter House, Bedford Street, London WC2R 0QB
Telephone: 01-836 9058

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Notices to importers

Issued by the Department of Trade, Import Licensing Branch, Charles House, 375 Kensington High Street, London W14 8QH. Telephone inquiries should be addressed to the number at the end of the notice.

1578: Imports of bananas from the dollar area

To offset expected shortfalls in supplies of fresh bananas to the United Kingdom from other sources, a supplementary quota of 7,000 tonnes has been established for imports from the dollar area.

In order to ensure continuity of imports, the Department of Trade's Import Licensing Branch will allocate the supplementary quota among existing licence holders, having regard to the use they made of their allocations under the quotas for 1975-76.

Import licences will be issued to importers against their allocations only for those amounts for which they can produce evidence of a firm contract with the overseas supplier.

Licences issued under these arrangements will not be valid after 30 September 1977.

The dollar area as defined in the open general import licence means Bolivia, Canada, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Republic of Honduras, Liberia, Mexico, Nicaragua, Panama, the Philippines, the United States of America and Venezuela.

Inquiries: Import Licensing Branch, tel. 01-603 4644 ext. 281.

1579: Importation of portable monochrome television sets from Taiwan

As announced on 23 September 1976 the importation of portable monochrome television sets originating in Taiwan is restricted with effect from 1 October 1976. The goods affected and the quota established for the period 1 October 1976 to 31 December 1977 are:

Tariff heading	Description	Quota (units)
ex 85.15	Monochrome television receivers with cathode-ray tubes whose bulb diagonal measurement is 39cm or less	70,000 (of which not more than 50,000 to be imported during the period 1 January-31 December 1977)

Existing surveillance arrangements

Imports of the television sets defined above from all non-EEC countries were already subject to surveillance arrangements. All valid surveillance licences for such imports from Taiwan have been revoked with effect from 1 October 1976 and the importers concerned have been informed.

Licensing arrangements

It is intended that, initially, import licences will be issued, within the limit of the quota, only in respect of goods due to be imported during the period 1 October to 31 December 1976, provided that those goods were either in transit to the UK at the date of the announcement of the restrictions (whether or not a surveillance licence had been obtained), or were the subject of an irrevocable letter of credit opened on or before the date of the announcement of the restrictions (whether or not they were in transit to the UK at that date).

Importers are therefore invited to submit applications for import licences in respect of goods to which the above circumstances apply. Applications should be made on Form ILB/A to Import Licensing Branch, Department of Trade, Charles House, 375 Kensington High Street, London W14 8QH, and should be accompanied by evidence (eg bill of lading or air waybill) of shipment on or before 23 September 1976, or a copy of an appropriate irrevocable letter of credit opened on or before 23 September 1976 and evidence of shipment. The closing date for receipt of such applications is 30 November 1976.

Allocations from any remainder of the quota will be based on past trade and traders are invited to apply to Import Licensing Branch at the address given above for such allocations not later than 30 November 1976. The applications should be accompanied by a statement of past trade by the applicant supported by a report by a qualified practising independent accountant in the form shown below and covering the periods listed therein.

Letters of credit

Traders are reminded that current exchange control regulations in respect of goods subject to quantitative restrictions prohibit banks from opening letters of credit, or amending those subsisting, unless they are satisfied that a valid import licence has been issued for such goods.

Re-exports

Application for licences for the import of television sets intended for re-export will be considered separately against satisfactory evidence.

Existing arrangements for imports from the eastern area

Transistorised television receivers originating in or consigned to the United Kingdom from the Eastern Area (which comprises Albania, Bulgaria, Czechoslovakia, The German Democratic Republic and Berlin (East), Hungary, North Korea, North Vietnam, The People's Republic of China, The People's Republic of Mongolia, Poland, Romania and The Union of Soviet Socialist Republics) are already subject to quota licensing arrangements which are unaffected by the new restrictions.

Inquiries: Import Licensing Branch, tel. 01-603 4644 ext. 280.

Importer's statement

I/We declare that the quantities of portable monochrome television sets originating in Taiwan which were cleared through the United Kingdom Customs in my/our name for home retention in the periods shown were as stated below:

		1974	1975	Jan.-Sept. 1976
ex 85.15	Monochrome television receivers with cathode-ray tubes whose bulb diagonal measurement is 39cm or less			

Date ..... Signed .....

Name of company ..... Status .....
(ie Proprietor, Partner, Director or Secretary)

Accountant's report

I/We have conferred with the officials and employees concerned in the compilation of the figures shown and have made such tests as I/We have considered necessary. I/We report that in my/our opinion, the figures are those required by the Department of Trade for the purpose of this application.

Date ..... Signed .....

Professional qualification .....

Address .....

.....

'T & I' index inquiries

Readers wanting to know when articles and items of information were published in *Trade and Industry* should consult the published indexes which are issued free to subscribers. For material published in recent months, inquiries of this kind can be made to the Department of Industry Library's indexing section, tel. 01-215 5842.

System of general valuation statements extended

A system of general valuation statements which has operated successfully at Liverpool, London, Dover, Hull and Southampton is to be extended today (1 October 1976) to all sea and airports (except Heathrow, London Airport. where special procedures already apply).

The system relieves importers, who have a regular flow of consignments from the same seller under the same conditions, from having to complete individual declarations on form C105 in almost identical terms for each consignment.

Further particulars may be obtained from collectors of customs and excise at the ports concerned.

Trading opportunities with Canada

A one-day seminar chaired by Lord Garnock, vice-chairman (Canada) of the North American advisory group of the BOTB, will take place at the World Trade Centre on Tuesday, 9 November 1976. For details, contact the World Trade Institute, World Trade Centre, London E1 9LB, tel. 01-488 2400.

Japanese market for jams and mechanical handling equipment reviewed

Openings in Japan for British-made jams and spreads and for mechanical handling equipment are reviewed in two market reports published by the British Overseas Trade Board.

The outstanding feature of the Japanese market for jams and spreads is its segmentation. A potential exporter of jams and spreads to Japan must define carefully the particular segment of the market he wishes to penetrate, and analyse its future course of development. The variety of segments in the market does however provide a wide range of opportunities for foreign manufacturers over a large number of price and quality combinations.

In the mechanical handling field opportunities exist for technology imports, which can be accomplished in several different ways, ranging from licensing to joint ventures. These opportunities are most significant in still undeveloped fields such as industrial robots and warehousing systems.

The reports were prepared for BOTB by International Business Inc, Tokyo. They are available to British manufacturers, price £5 each post free, from the Central Library, 1 Victoria Street, London SW1H 0ET.

New export director for south west

Jack Evans will be taking over as exports director in the south west regional office of the Department of Industry following the retirement of the present director, Robert Calver. Mr Evans takes up his new appointment in Bristol on 4 October 1976.

Export opportunities in Hong Kong

A seminar on export opportunities in Hong Kong will be held by the Manchester Chamber of Commerce and Industry on the morning of 5 October. Speakers will be I. A. C. Kinnear, senior British trade commissioner Hong Kong, and Mr D. L. Millar, Far Eastern general manager of the Standard Chartered Bank Ltd. The recent successes of British companies in the prestigious mass transit underground railway project have recently indicated the considerable potential of a market which is, all too frequently, neglected by British exporters.

Further details of the seminar from Dennis M. Arrandale, assistant secretary, Manchester Chamber of Commerce and Industry, PO Box 559, Ship Canal House, King Street, Manchester M60 2HB (tel. 061-832 5574).

ECGD general purpose lines of credit

The table below lists lines of credit guaranteed by the Export Credits Guarantee Department under which there is capacity for further export business to be financed as at September 1976.

Departmental reference	Tel. ext. at ECGD HQ	Recipient country	Borrower	UK bank	Purpose	Loan value £m	Minimum single contract value £000's	Final date for entering into contracts
LC 319	7340	Brazil	BADESP	Schroder Wagg	Capital and semi-capital goods and associated services	5	10	30 September 1976
LC 499	7340	Brazil	Banco Nacional do Desenvolvimento Economico	Lloyds Bank International	Capital and semi-capital goods and associated services and project business	20	100	6 May 1978
LC 454	7340	Brazil	Banco Novo Rio de Investimento	Lloyds Bank	Capital and semi-capital goods	2.5	10	30 September 1976
LC 602	7575	Bulgaria	Foreign Trade Bank	Nat Westminster	Capital goods and associated services	2	5	31 March 1977
LC 612	7575	Bulgaria	Foreign Trade Bank	Lloyds Bank	Capital goods and associated services	1	5	30 April 1977
LC 381	7575	Czechoslovakia	Ceskoslovenska Obchodni Banka AS	Lloyds Bank	UK capital goods and associated UK services	2	5	30 June 1978
LC 417	7575	Czechoslovakia	Ceskoslovenska Obchodni Banka AS	Nat Westminster	Capital plant and equipment and associated services	4	5	31 January 1977
LC 366	656	Denmark	A. P. Moller	Lazards	Ships equipment	2	10	1 November 1976
LC 594	656	Denmark	Kjobenhavns Handels Bank	Barclays Bank International	Capital plant and equipment and associated services	1	10	30 November 1976
LC 608	656	Denmark	Privatbanken	Barclays Bank International	Capital plant and equipment and associated services	0.5	10	30 November 1976
LC 684	654	Finland	Bank of Helsinki	S. G. Warburg	Plant, equipment and associated services	1	10	10 October 1977
LC 672	7368	France	Credit Industriel et Commercial	Nat Westminster	UK capital plant and equipment and associated services	1	10	15 March 1977
LC 614	7368	France	Credit Du Nord et Union Parisienne	Midland Bank	Capital goods and associated services	2	10	31 December 1976
LC 532	7368	France	Compagnie Francaise Des Ferrailes SA	Midland Bank	Capital goods and associated services	1	10	28 February 1977
LC 527	7568	GDR	Deutsche Aussenhandels Bank	Nat Westminster	Capital goods and associated services	2	10	31 October 1977
LC 618	671	German Federal Republic	Commerzbank AG	Lloyds Bank	UK plant and equipment and associated UK services	2	10	30 November 1976
LC 685	7340	Hungary	National Bank of Hungary	Morgan Grenfell	Capital plant and equipment and associated services	3	5	15 July 1978

Departmental reference	Tel. ext. at ECGD HQ	Recipient country	Borrower	UK bank	Purpose	Loan value £m	Minimum single contract value £000's	Final date for entering into contracts
LC 551	286	Costa Rica	Banco Central de Costa Rica	Lloyds Bank	Capital and semi-capital goods and services	2	10	30 April 1977
LC 584	587	Indonesia	Indonesia Government	Lloyds Bank	Construction work equipment and land reclamation machinery, capital equipment	20	200	15 May 1977
LC 333	671	Irish Republic	First National City Bank	William and Glyn's	UK plant and equipment and associated services	1.5	10	30 September 1976
LC 440	671	Irish Republic	Industrial Credit Co	Nat Westminster	UK plant and equipment and associated services	2.5	10	30 October 1976
LC 511	671	Irish Republic	Bank of Ireland Finance Ltd	Nat Westminster	UK plant and equipment and associated UK services	1	10	28 February 1977
LC 545	671	Irish Republic	Electricity Supply Board	Hill Samuel	UK capital plant and equipment	2.3	10	30 November 1976
LC 540	656	Israel	Bank Hapoalim	Rothschilds	UK capital goods and associated UK services	5	10	31 December 1976
LC 664	656	Israel	Bank Leumi le Israel BM	Rothschilds	UK capital plant and equipment and associated UK services	5	10	22 April 1977
LC 443	656	Israel	Industrial Development Bank of Israel	Warburgs	UK capital goods and associated services	3	10	21 September 1976
LC 468	656	Israel	First International Bank of Israel	Rothschilds	Capital goods and associated services	1	10	30 September 1976
LC 577	656	Israel	United Mizrghi	Rothschilds	UK capital goods and associated services	1	10	30 September 1976
LC 636	656	Israel	Industrial Development Bank of Israel	Warburgs	UK capital goods and associated services	3	10	30 June 1977
LC 652	7354	Korea South	Korea Exchange Bank	Lloyds Bank	Capital goods and associated services	4	10	31 March 1977
BC(MC) 6/26072	287	Mexico	Petroleos Mexicanos	Baring Bros.	Capital goods and services	20	500	1 August 1978 (Polyethylene plant contracts) 1 February 1978 (Other contracts)
LC 502	587	New Zealand	National Bank of New Zealand	Lloyds Bank	Capital goods	2	10	31 March 1977
LC 541	587	New Zealand	Marac Corporation	Williams and Glyn's	Capital plant and equipment and associated services	0.5	10	31 December 1976
LC 375	7367	Peru	Banco Popular Del Peru	Lazard Bros	Capital plant and equipment	2.5	40	13 January 1977
LC 106	587	Philippines	Manioa Electric Co Meralco	Schroder Wagg	Capital plant and equipment for electrical transmission and distribution	3	50	22 January 1978
LC 428	7573	Poland	Bank Handlowy	Nat Westminster	Capital goods and associated UK services	20	50	20 March 1977
LC 661	7573	Poland	Bank Handlowy	Lloyds Bank	Capital plant and equipment and associated services	2	10	8 August 1977
LC 406	654	Portugal	Banco Fomento Nacional	Midland Bank	Capital plant and equipment	3	25	31 October 1976
LC 620	654	Portugal	SFP	Rothschilds	Capital plant and equipment	5	10	31 January 1977
LC 505	7575	Romania	Foreign Trade Bank	Lloyds Bank	Capital goods and associated services	7	5	30 June 1978
LC 510	7575	Romania	Foreign Trade Bank	Barclays Bank International	Capital goods and associated services	3	5	30 May 1977
LC 314	7152	South Africa	Department of Finance	Hill Samuel	UK goods and associated UK services primarily for use on various railway projects	18	80	22 April 1976 (Extension under consideration)
LC 397	7152	South Africa	ESCOM	Hill Samuel	Capital goods and related services for the electric supply undertaking operated by ESCOM	5	100	Extension under consideration
LC 495	7152	South Africa	IDC	Schroder Wagg	Capital goods and associated services	10	15	28 February 1977
LC 539	7173	South Africa	Rand Bank	Man Hanover Export Finance	UK plant and equipment and related services	1	25	30 April 1977
LC 659	7152	South Africa	SARHA	Hill Samuel	Railway equipment	30	100	1 October 1977
LC 650	7152	South Africa	French Bank of Southern Africa	Morgan Grenfell	Capital plant and equipment	2	30	31 January 1978
LC 382	654	Spain	Banco de Bilbao	Hill Samuel	Capital goods and associated services	5	10	30 September 1976
LC 576	654	Spain	Banco Int De Comercio	Kleinwort Benson Ltd	Plant and equipment	1	100	31 August 1977
LC 421	654	Spain	Banco Atlantico	Nat Westminster	Capital goods and associated services	1	10	31 October 1976
LC 444	654	Spain	Bank of London and South America	Lloyds Bank	Capital plant and equipment	5	10	21 December 1976
LC 558	654	Spain	Banco Catalana	Tozer Standard and Chartered Ltd	Capital plant and equipment	1	10	17 January 1977
LC 633	654	Spain	Banco Industrial de Catalina	Standard Chartered	Capital plant and equipment	0.5	10	30 November 1977
LC 589	654	Sweden	Skandinaviska Enskolda Banka	Scandinavian Bank	Plant, equipment and associated services	1	10	31 October 1977
LC 624	654	Sweden	Gotabanken	Lloyds Bank	Capital plant and equipment	2	10	31 July 1977
LC 508	287	USA (for buyers in USA, Mexico, Canada, Venezuela, Brazil or Colombia or in markets later approved by ECGD)	North Carolina National Bank	Nat Westminster	UK goods and associated services	1	10	15 July 1976 (Extension under consideration)
LC 645	7573	USSR	Vneshtorgbank	Morgan Grenfell	Capital goods and associated services	10	50	31 October 1977
LC 646	7573	USSR	Vneshtorgbank	Lloyds Bank	Capital goods and associated services	10	50	31 October 1977
LC 523	7575	Yugoslavia	Yugoslav Investment Bank	Barclays Bank International	Capital goods and associated services	8	10	30 April 1977
LC 563	7575	Yugoslavia	Privredna Banka Zagreb	Lloyds Bank International	Capital goods and associated services	5	10	30 September 1976
LC 626	7575	Yugoslavia	Stopanska Banka Skopje	Lazard Bros	Capital goods and associated services	3	100	31 December 1977
LC 208	7467	Zambia	NCCM	Tozer Standard and Chartered Bank	Capital goods and services for development of open-cast and underground mining (Nchanga Consolidated Copper Mines Ltd)	4	40	31 December 1977 (New supplemental in negotiation)
LC 574	7467	Zambia	Roan Consolidated Mines	Morgan Grenfell	Roan Consolidated Mines	3	5	27 February 1977

Requests for further information on any of these lines of credit should be made to the bank concerned or to Export Credits Guarantee Department, PO Box 272, Aldermanbury House, Aldermanbury, London EC2P 2EL (tel. 01-606 6699, extensions as listed in the second column).

Exporters when negotiating business which might be financed under one of the above lines of credit, should ensure that their contract price contains sufficient margin to cover the cost of any premium payable. These details can be obtained from the bank concerned.

Fostering economic growth and co-operation in Asia

This article – the latest in the 'Trade and Industry' series on the international lending agencies* – provides some background to the operations of the Asian Development Bank (ADB) and the opportunities it presents for British businessmen.

The concept of promoting a regional development bank for Asia was developed as a result of discussions at Escap's† first ministerial conference on Asian economic co-operation, held in Manila in December 1963. A charter – the agreement establishing the Asian Development Bank – was adopted at a second ministerial conference two years later, towards the end of 1965. The bank formally opened for business on 19 December 1966, with its headquarters at Manila in the Philippines.

At that time 31 countries and territories enjoyed membership. Now, less than 10 years later, membership stands at 42 (see subscriptions, page 34).

The Asian Development Bank was set up as an international development finance institution to lend funds, promote investment and provide technical assistance to regional developing member countries and generally to foster economic growth and co-operation in the Asian region. Two features should be emphasised: first, it is an Asian bank, conceived by Escap, located in the Escap region with the majority of capital and the majority of professional and administrative staff coming from within the region, and second, membership of the ADB extends beyond the region and non-regional countries have made significant contributions to both the capital structure and the management of the bank. Its functions and objectives have been defined as: to promote investment in the region of public and private capital for development purposes; to utilise the resources at its disposal for giving loans for the development of the developing member countries of the region; to meet requests from members in the region for assistance in the co-ordination of their development policies and plans; and to provide technical assistance for the preparation, financing and execution of development projects and programmes.

A bank is of little use without financial resources and to make a meaningful impact on the objectives it has set itself, substantial resources are obviously required. These resources are provided by subscribed capital from members which is made available against the authorised capital of the bank and the issue of bonds on the international money markets, or, for concessional lending, by the acceptance of contributions from members to what are called 'Special Funds'. Increases in authorised capital may be agreed, leading to additional subscriptions from member countries, but the percentage of shares held by regional members must not fall below 60 per cent of the total subscribed shares.

At the end of 1975, the total subscribed capital stood at some $3,200 million when the authorised capital stood at almost $3,700 million. The United Kingdom's share of the subscribed total was $90 million.

* Earlier articles describing the Inter-American Development Bank and the European development fund appeared in the 9 July and 30 July issues of *Trade and Industry*, respectively.

† Escap: the United Nations Economic and Social Commission for Asia and the Pacific.

ADB's lending operations

ADB lending falls into two broad categories – ordinary loan operations and special funds operations.

Ordinary operations are financed from the ordinary capital resources of the bank and are intended to cover the foreign exchange and, in suitable cases, a reasonable proportion of the local currency components of specific projects. In addition to being made directly for particular development projects, loans can be granted to national development banks or other appropriate agencies which can then re-lend to projects which in themselves are not large enough to warrant direct supervision by the bank.

Special funds are the sources of finance for the bank's concessional loans, ie loans of longer maturities, longer grace periods and lower charges than those used for ordinary operations. There is also a special fund for providing technical assistance on a loan or grant basis.

The bank is authorised under its charter to accept contributions, and also to set aside up to 10 per cent of its paid-in capital, to special funds for concessional lending purposes.

The funds available for concessional lending are administered in two categories of special funds – the multi-purpose special fund, established in 1968, and the Asian development fund (ADF) which came into operation in June 1974. Most of the contributions administered in the multi-purpose special fund have been transferred to the ADF and the former will be wound up in due course.

The total of loan approvals passed the $2,000 million level

A 10.7m³ capacity Terex TS-14B motor scraper manufactured by General Motors, Scotland, of the type supplied to the River Valley Development Board in Sri Lanka by Blackwood Hodge under an Asian Development Bank loan.

Asian Development Bank: the facts (at 31 March 1976)

Resources

	Amount ($ million)
Ordinary capital resources	
Authorised capital	3,676.4
Subscribed capital	3,201.5
Capital paid-in (subscription instalments matured)	962.0
Total borrowings outstanding	806.2[1]
Ordinary reserve	77.1[2]
Special funds resources	696.7[3]
Multi-purpose special fund	38.4
Asian development fund	649.6[4]
Technical assistance special fund	
contributions committed 19.0	
amounts utilised 10.3	8.7

Bank staff

	Number
Total	691
Professional staff	268[5]
Supporting staff	456
Nationalities	35

Lending activities

	Number	Amount ($ million)
Total loans approved[6]	254	2,639
Ordinary loans[6]	153	1,980
Special funds loans	101	659
Number of projects financed	231	
Number of countries assisted	21	
Cumulative lending by sector (1968-March 1976)	% of total projects approved	
Agriculture and agro-industry	27.7	22.3
Industry (other than agro-industry) including development banks	17.8	22.0
Public utilities	31.2	34.4
Transport and communications	21.6	20.3
Education	1.7	1.0
Estimated total cost of projects directly financed		4,918
Share of bank loans (per cent) 45		
Estimated total cost of projects indirectly financed through national development banks (including cost of projects as yet uncommited – $517 million)		1,682
Share of bank loans (per cent) 26		

Technical assistance (TA) activities

	Number	Amount ($ million)
Total TA projects[7]	189	31.6
TA to member countries	158	25.6
Regional activities	31	6.0
Countries assisted[8]	21	
TA by type of service – number[8]		
Advisory and operational	55	
Project preparation	103	
Loans which have resulted from bank TA[8]	55	592.9
Cumulative sectoral distribution of TA (1967-March 1976)[8]	% of total projects approved	
Agriculture and agro-industry	47.5	43.5
Industry (other than agro-industry) including development banks	12.0	7.4
Public utilities	18.3	27.2
Transport and communications	17.1	17.9
Education	1.3	0.7
Others	3.8	3.3

[1] The bank has borrowed funds in Austria, Belgium, the Federal Republic of Germany, Italy, Japan, Kuwait, Luxembourg, the Netherlands, Saudi Arabia, Switzerland, United Arab Emirates and the United States. In addition, the bank has borrowed funds by issuing two-year dollar-denominated bonds to central banks or monetary authorities of its members.
[2] Excluding net income of 1975.
[3] Equivalent to US $ at rates of exchange adopted by the bank as of 31 March 1976.
[4] Including capital set-aside.
[5] Excluding president and vice-president.
[6] Excluding three loans totalling $1,350,000 approved but incorporated in subsequent loans.
[7] Including projects financed from sources other than the bank.
[8] Excluding regional activities.

Subscriptions (at 31 December 1975)

Regional members	Subscriptions ($ million)
Afghanistan	14.416
Australia	256.349
Bangladesh	45.238
Burma	24.127
Cambodia	10.556
Fiji	3.016
Gilbert Islands	0.181
Hong Kong	24.127
India	280.476
Indonesia	241.270
Japan	603.175
Korea, Republic of	223.175
Laos	1.267
Malaysia	120.635
Nepal	6.514
New Zealand	68.038
Pakistan	96.508
Papua New Guinea	4.162
Philippines	105.556
Singapore	15.079
Solomon Islands	0.302
Vietnam	36.190
Sri Lanka	25.695
Taiwan	48.254
Thailand	60.318
Tonga	0.181
Western Samoa	0.072
Total	2,314.877
Non-regional members	
Austria	15.079
Belgium	15.079
Canada	75.397
Denmark	15.079
Finland	6.032
France	75.397
Germany, Federal Republic of	102.540
Italy	60.318
Netherlands	33.175
Norway	15.079
Sweden	6.032
Switzerland	15.079
United Kingdom	90.476
United States	361.905
Total	886.667
Grand total	3,201.544

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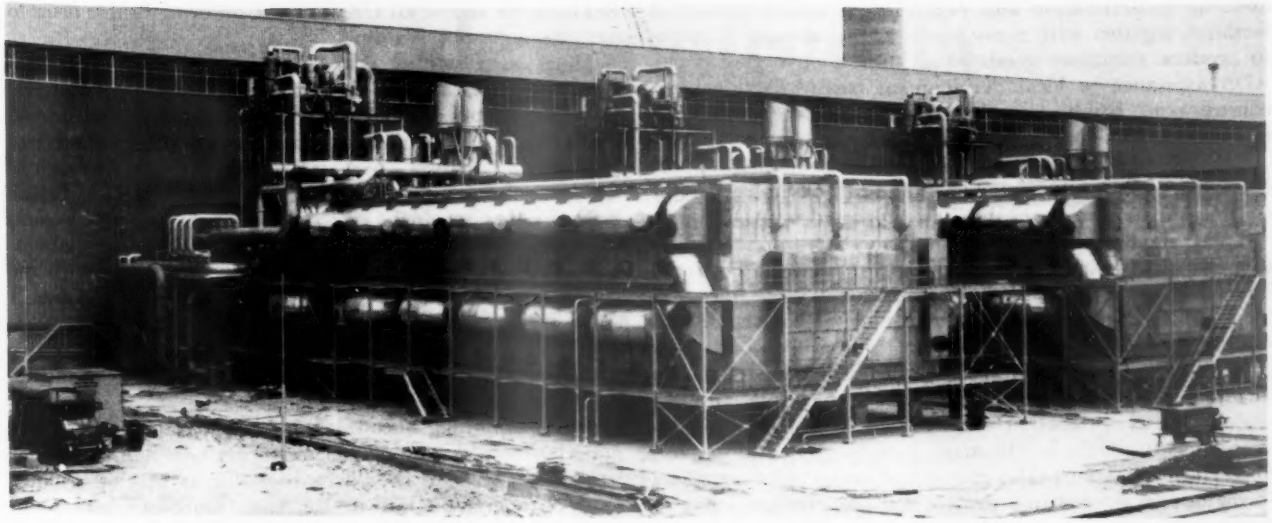

Offshore finance for the Hong Kong government's desalting plant at Lok On Pai was provided by the Asian Development Bank. Consulting engineers for the design and, jointly with the water authority, for the supervision of construction were Binnie and Partners of London.

during the second quarter of 1975. By the end of March this year (see opposite page) the bank had approved 254 loans totalling $2,639 million for 231 projects in 21 developing member countries. Of these, 153 loans totalling $1,980 million were made from ordinary capital resources and 101 loans for $659 million from special funds.

The Asian development fund has become the major vehicle for ADB concessionary aid. Contributions are largely untied for procurement in all developing member and all contributor countries. Some $650 million of resources have been allocated to the ADF (of which about $36 million was from the UK) but these funds will be exhausted very shortly and the bank is seeking replenishment of some $830 million from contributors to provide further concessionary funds to meet likely requirements for the next three years. Even though the shortage of ADF resources, coupled with adverse effects of currency fluctuations, resulted in a slowing down of loan activity, $166 million was provided under 14 loans during 1975.

Funds remaining in the multi-purpose special fund – $38 million at the end of March 1976 – are also available to finance concessionary lending, but the contributions have been made available on differing terms and conditions in contrast to uniform ADF terms.

Technical assistance special fund resources provide a contribution towards the cost of the bank's technical assistance operations. These can be aimed at the co-ordination of members' development policies and plans to seek better utilisation of resources as well as preparing, financing and executing development projects and programmes. The bank can provide advisory services from its own resources, outside consultants or support the national or international institutions. Although the bank is not bound to finance in whole or in part projects which evolve as a result of technical assistance, this can happen in appropriate cases.

Within the overall lending activities, the bank has concentrated on sectors where the need for accelerated developments is felt to be most urgent. In 1975, for example, 37.2 per cent of loans were for agriculture and related activities and 28.8 per cent directed at public utilities, mainly for the exploitation of indigenous power resources. Transport and communication projects accounted for a further 12.3 per cent of lending with industrial projects (including lending to local development banks) absorbing 19.5 per cent. Individual projects supported in this way can be of a substantial size – $10 million to $20 million is common – and openings for consultancy services appear together with opportunities for manufacturers.

Opportunities for UK consultants

The bank employs consultants in connection with technical assistance programmes. The bank also employs consultants when it is necessary to supplement its own staff on studies where the bank is the executing agency – at the stage of project appraisal and in order to scrutinise project execution.

Borrowers may also find it necessary to employ individual consultants or consulting firms to facilitate the satisfactory implementation of the project for which a loan is made by the bank. Where borrowers employ consultants, they are responsible for their selection.

While the bank has no list of 'approved' consultants, it does maintain files on the capabilities and experience of individuals and firms in order that it may judge their acceptability for a particular project. It is, therefore, essential for consultants wishing to participate in ADB work to register their capabilities and experience with the bank and to ensure that this information is kept up-to-date.

. . . and for manufacturers, contractors and equipment suppliers

Bank guidelines for procurement normally insist on international competitive bidding between member countries for all construction work and major supplies of goods or equipment. Some bank projects give an indication of the wide range of products in demand.

Apart from undertaking major schemes of hydroelectric and thermal electrical generation and transmission and distribution, the bank has participated in the financing of fertiliser plants, mainly for urea production, based on readily available local raw materials like natural gas or refinery products; assisted in the setting up of plants to help produce synthetic fibres; plant to produce heavy engineering equipment; large and small irrigation dams and water supply systems; gas pipelines and distribution systems; the expansion or establishment of seaports and airports, road and rail facilities; telecommunication facilities, including a satellite earth station; improvement of plantations and the processing of their products such as palm oil, tea and sugar; the integrated development of agriculture from water supplies, seed farms

and the modernisation and expansion of fishing fleets and facilities, together with many hundreds of industrial ventures to produce consumer goods of all sorts often supported by ADB assistance to local development banks. Earthmoving, construction, handling and transport equipment play an important part with many of these projects.

And so with the condition of international bidding, opportunities are constantly arising for the supply of services and/or equipment associated with projects supported by ADB funds.

There should be no excuse for potential suppliers being unaware of the requirements until the last moment. The bank informs member nations of projected loans while they are being subjected to serious consideration by the bank staff. This gives interested parties initial warning of from six months to a year before to the bank's decision on the loan. Once the bank's directors have authorised an advance, details are publicly released – this notification usually precedes the issue of detailed bids to tender by the many months needed to prepare detailed specifications. This interval allows potential suppliers to register an interest in a project and prepare themselves to respond to the formal tender invitation. Return dates for tender invitations extend from 60 days, in the case of goods and services, to 90 days for civil work contracts.

UK share of contracts

The existing share of supplies from the UK for ADB-financed projects is substantial. Of share capital loans, contracts placed up to the end of 1975 amounted to approximately $941 million; the UK obtained contracts to a value of $39.7 million, or about 4.2 per cent of total loans against a UK participation of 2.8 per cent in the bank's share capital. Of the concessional loans from special funds, UK contracts amounted to $17.3 million (about 8.3 per cent) out of a total contracting of $209 million. It is difficult not to feel that worthwhile opportunities are being presented to UK concerns in this way and that more UK firms could benefit. During a recent address at the London Chamber of Commerce and Industry the deputy director of projects at the ADB, Wolf D. Kluber, offered five pointers to encourage more UK firms to share in ADB-financed procurement.

First, said Mr Kluber, British firms should not be discouraged by earlier results when three factors might have raised problems: the first was the fact that the size of bank loans – and hence probably the size of individual contracts – was perhaps on the low side; the second was the prevalence of somewhat unrealistic exchange rates which favoured suppliers in certain countries; and the third was the trade distortion suffered by Pacific rim countries as a result of war in south-east Asia. Now, he said, all three factors had changed favourably.

Next, Mr Kluber pointed out that, with the ADF now almost completely based on untied contributions, the door was open for almost all UK business, allowing British firms to participate in more bidding.

Third, a substantial part of the contracting under ADB loans was for civil works contracts which included, in several cases, the supply of equipment. Mr Kluber said that he was not aware that the UK had submitted a significant number of bids for this business – perhaps because there was enough of this sort of work nearer home, or perhaps because British firms felt they would be priced out. But, he said, civil works contracts were worth more attention, particularly in collaboration with contractors in the borrowing countries. 'With the advantage of the knowledge of your contractors in the area, I am sure that many possibilities are open.'

Fourth, Mr Kluber urged British firms to be aggressive participants in the markets of the Asian developing countries. Poor though several of these countries may be, he said, all of them were pushing ahead. Their need of capital goods and materials would expand. Competition for business under bank-financed loans should be regarded as part of Britain's total commercial effort in the east, south-east and south Asia and not relegated to low priority in this country's business plans.

Finally, Mr Kluber said it was important to remember that a considerable part of Britain's long-term effort to secure business must be by generating that business. The UK, he said, was generously represented in almost all aid consortia in Asia and Britain's bankers were very active in Hong Kong, Singapore and other Asian cities. 'And so it is my personal conviction that there are many more opportunities to come where your industry can supply at a competitive price even considering the relative distance from some of our member countries in the area.'

Keeping in touch with ADB opportunities

Important opportunities for UK exporters are given special treatment within the government's overall export promotion programme. A separate unit within the General Export Services Division of the Department of Trade – the Project Sub-Section – keeps a close watch on all ADB project activities and holds copies of the various ADB guidelines, other background information and documents relating to individual projects. The section monitors progress of a project from inception and ensures, with the help of the commercial sections of our overseas posts, that a full signposting service of notices is provided in the Export Intelligence Service (EIS).

To make the best use of this support potential, suppliers and consultants should ensure that they have an appropriate 'profile' for their EIS subscription and keep in touch with the Project Sub-Section (Room J.33 Export House, 50 Ludgate Hill, London EC4M 7HU, tel. 01-248 5757 ext. 595 or 557) who will be happy to deal with any general questions that may arise.

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Overseas trade country data

Australia

Decision on the report on storage batteries (accumulators). The Australian government's decision on the Industries Assistance Commission report on storage batteries (accumulators) (tariff heading 85.04) has been announced. It is that the commission's recommendations are not accepted, and that no tariff changes in respect of this item are at present contemplated.

The commission's report on primary batteries is expected to be issued shortly and the government will make its decision on this in due course.

Inquiries: OTAR 01-248 5757 ext. 468/469/401.

Importation of cats and dogs. No dog or cat may be imported into Australia, except in accordance with the terms of an import permit issued by the Chief Medical Officer, Canberra House, 10/16 Maltravers Street, London WC2R 3EH.

The import permit will state the place of departure from Great Britain and place of entry into Australia dependent upon whether the animal is travelling by ship or by aircraft. In the case of air travel, the airport of departure will be Heathrow or any other airport as specified on the import permit.

All dogs will be required to undergo a blood test for Leptospirosis in Great Britain.

Inquiries: Ministry of Agriculture, Fisheries and Food, Animal Health Division, 01-337 6611 ext. 412.

Industries Assistance Commission reference on calcium carbide. A reference has been sent to the Industries Assistance Commission asking for a report on the question whether assistance should be accorded the production in Australia of calcium carbide falling within items 28.56.1, and 38.19.9 of the customs tariff.

UK firms or trade associations intending to submit evidence at the public hearing should advise the Secretary, Industries Assistance Commission, PO Box 80, Canberra, ACT 2600, Australia, without delay. Evidence may be submitted either through the accredited agent of the firm or trade association concerned or through the Australian British Trade Association, 21 Tothill Street, London SW1 (01-799 7447). The Association charges a fee for its services, the amount varying according to the work entailed in the preparation of a submission and whether or not the interested party is a member.

Inquiries: CRE 01-215 5319. Ref. CRE 1727/76

Tariff quotas: sheets and plates of iron or steel. The Australian government has just announced the lifting of the quotas on cold rolled sheets and plates of iron or steel not exceeding 3.2mm in thickness (tariff heading 73.13.1) as from 1 October 1976.

Sheets and plates of galvanised or corrugated and galvanised iron or steel (tariff heading 73.13.3) continue to be subject to quota restrictions, as previously reported.

Inquiries: OTAR 01-248 5757 ext. 468/469/401.

Temporary protection of baby carriages. The Department of Industry and Commerce has received a request for temporary protection against imports of baby carriages falling within item 87.13.100 of the customs tariff.

Interested parties either in support of or in opposition to the request may submit their views to the department for consideration. Requests for temporary protection are initially received and considered by the department. They may be referred later to the Temporary Assistance Authority for inquiry and report within 30 days of the date of the reference.

Any temporary protection which may be accorded the goods by the government after receipt of the report by the Temporary Assistance Authority will be in the nature of a holding action pending government consideration of the question of long-term protection for the local industry following inquiry and report by the Industries Assistance Commission.

Exporters should note that it has been made clear that, should the need for urgent action emerge from these inquiries, goods ordered but not cleared for home consumption at the date of the announcement, will be subject to the terms of the action. Australian importers therefore have been urged to exercise caution in placing orders overseas and in entering into financial commitments on such orders as special consideration may not be given to outstanding commitments should action be taken by the government.

Evidence must be formally submitted at the public hearing, either by the nominated representative of the firm or trade association concerned or through the Australian-British Trade Association, 21 Tothill Street, London SW1 (01-799 7447), who will represent UK interests if authorised. The Association charges a fee for its services, the amount varying according to the work entailed in the preparation of a submission and whether or not the interested party is a member. UK firms or trade associations intending to submit evidence should advise the Secretary, Industries Assistance Commission, PO Box 80, Canberra, ACT 2600, Australia, as soon as possible.

Inquiries: CRE 01-215 5319. Ref. CRE 1726/76

Further information

In many cases further information on the notices published on these pages is available to British exporters from the Department of Trade. The main branches concerned are: Commercial Relations and Export (CRE) Division, 1 Victoria Street, London SW1H 0ET (tel: direct dialling); and Overseas Tariffs and Regulations Section (OTAR), Export Data Branch, Export Services and Promotions Division, Export House, 50 Ludgate Hill, London EC4M 7HU (tel: 01-248 5757). In each case, the relevant information source is indicated at the end of the notice by its initials (OTAR or CRE) and, in the case of OTAR, the telephone extension.

Chile

Duty amendments. Chilean Ministry of Finance decrees 723, 750 and 768 published in the *Diario Oficial*, reduces the rates of duty for the following items (previous rates shown in brackets):

29.14.09.01	Acrylic acid	30% (40%)
29.14.09.69	Other esters	30% (40%)
29.14.09.99	Others	30% (40%)
29.14.10.01	Methacrylic acid	30% (40%)
29.14.10.69	Other esters	30% (40%)
29.14.10.99	Others	30% (40%)
29.22.01.01	Methylamine and its salts	20% (40%)
29.27.00.01	Acrylonitrile	30% (40%)
29.31.03.99 (99)	Other organo-sulphur compounds	25% (40%)
36.02.89.00	Other prepared explosives	45% (50%)
38.03.89.00 (99)	Other activated carbons	15% (25%)
85.11.04.01	Electric welding machines, hand operated	45% (55%)
85.11.90.00	Parts and pieces for electrical furnaces, heating equipment and the like	35% (45%)

Inquiries: OTAR 01-248 5757 ext. 474/476.

Fiji

Import control on spirits and mechanical cane harvesters. The Fiji Minister of Finance has announced the Customs (Pro-

hibited Imports) (Amendment) (No 3) Order 1976 and the Customs (Prohibited Imports) (Amendment) (No 4) Order 1976, both of which came into force on 27 August 1976.

The second schedule to the Customs (Prohibited Imports) Order, 1975 is amended by substituting the following item for item 7:

	Conditions, restrictions or requirements
7 Spirits – brandy, whisky and rum	The importer shall prove to the satisfaction of the Comptroller that the spirits have matured by storage in wood for a period not less than three years in respect of brandy and whisky and not less than two years in respect of rum: Provided that the Comptroller may – a permit either that the spirit may be exported within a specified time or that it may be stored in bond until such time as he is satisfied that the spirit has so matured for three years in respect of whisky and brandy, and two years in respect of rum; and b accept as proof that the spirit is not less than three years old in respect of whisky and brandy and two years old in respect of rum, a certificate to that effect issued by a Collector of Customs at the port of shipment or a certificate to that effect issued by a public authority having knowledge of the fact.

The second schedule to the Customs (Prohibited Imports) Order, 1975 is amended by adding the following new item after item 10:

11 Mechanical cane harvesters classified in item 84.25.00.09 of the first schedule to the customs tariff ordinance.	The importer shall produce to the Comptroller a licence to import issued by the Director of Agriculture.

Inquiries: OTAR 01-248 5757 ext. 469.

Duty concession for weighing and measuring machinery. The Fiji Minister of Finance has announced the Customs Tariff Ordinance (Amendment) (No 3) Order 1976 which came into force on 27 August 1976.

The First Schedule to the Customs Tariff Ordinance is amended by inserting the following additional code number immediately after code number 122 in Part 2:

	Import duty	
	Fiscal	Customs
123 a Weighing and measuring machinery instruments, apparatus and appliances, including weights and measures of metric denomination, (but excluding those with dual denomination) as the Comptroller may approve upon recommendation of the Metrication Board (Such headings as the Comptroller may specify)	5%	5%
b Essential components and parts as approved by the Comptroller upon the recommendation of the Metrication Board, for conversion or adaptation of any commercial or industrial weighing and measuring machinery, instruments, apparatus and appliances to metric denomination (Such headings as the Comptroller may specify)	5%	Free

Inquiries: OTAR 01-248 5757 ext. 469.

Finland

Price controls. The Finnish authorities have announced new price control measures. Three lists of goods have been published:

List A: Goods for which maximum price levels are set (generally prices which were current at the end of the price freeze).
List B: Goods for which the Board of Industry and Consumer Interests must be notified of price changes and details of their calculation.
List C: Notification of sale prices must be made on the goods in this list and not covered in list A within 14 days of the sale of the goods.

These arrangements do not cover agricultural equipment and machinery (including accessories and spares) under BN chapter 84, for which separate arrangements will be made.

Inquiries, giving BN numbers, to OTAR 01-248 5757 ext. 458/461.

German Democratic Republic

Five-year plan. Details of the GDR 5-year plan for 1976-80 have now been published. The booklet 'directives for the 5-year plan for the GDR's national economic development 1976-80' is available on loan from the Statistics and Market Intelligence Library, Department of Trade, 50 Ludgate Hill, London EC4M 7HU, and may be inspected there (tel. 01-248 5757 ext. 368).

Greece

Transfer of items to import list A. As from 30 July the following items have been included in list A and can only be imported after government approval.

Tariff no	Description
ex 36.05	Of the pyrotechnic articles referred to in this tarrff heading, fireworks in general, toy caps whether or not in strips or rolls, rockets and similar articles for amusement purposes under tariff headings 36.05 B1, B2 and from 36.05 B3, B4 and B5
ex 59.02	Non-woven carpets known as Moquette
ex 98.10	Gas lighters only, of single or multiple filling, the main body of which as well as the gas tank is made of plastic.

Inquiries: OTAR 01-248 5757 ext. 439.

Guyana

Electrical equipment. A notice has been issued by the Guyana Electricity Corporation, reminding importers that electrical equipment imported into Guyana must be capable of operating at both 50 and 60 cycles per second, and that the importation of electrical equipment which can be operated only at 50 cycles per second is prohibited.

These restrictions were imposed in order to ensure that imported electrical equipment would comply with certain specifications which are required by the frequency conversion programme now in progress.

Inquiries: OTAR 01-248 5757 ext. 7312/456/457.

Israel

Import duty amendments. Amendments have been issued to the Israeli customs tariff affecting the following BN numbers:

39.01	39.02	48.01	58.01	58.02	58.04	59.02	59.03
60.01	60.06	73.07	73.15	84.11	84.17	84.52	84.59
84.63	84.65	85.01	85.17	85.19	90.14	90.28	93.03

Inquiries: OTAR 01-248 5757 ext. 458/461.

South Africa

Amendment to import deposit scheme. Notice R193 published in *Government Gazette* 5288 of 17 September amends the regulations published in notice R137 of 23 July by the inclusion of:

1 Goods entered under item 405.04 – goods for the welfare of the blind and deaf – are exempt;
2 Goods the fob price of which exceeds R10,000 in respect of which a certificate has been issued by the Secretary for Commerce declaring such goods will be re-exported from South Africa or South West Africa after processing or further processing;
3 Goods the fob price of which exceeds R10,000 in respect of which a certificate has been issued by the Secretary for Commerce declaring that such goods are for essential health services to state or state-aid medical or veterinary institutions.

Inquiries: OTAR 01-248 5757 ext. 471/462/472/473.

Customs tariff changes. The following amendments were published in the South African *Government Gazette* of 3 September 1976:

R1589 BN 28.47, 29.13 and 29.16. Specific provisions are made for sodium ammonium decavanadate, anthraquinone disulphonic acid and trisodium citrate dehydrate, and the rate of duty thereon is reduced from 10 per cent to free.

R1590 BN 59.08 and 59.12. The rates of duty on certain impregnated, coated, covered or laminated textile fabrics are amended.

R1592 BN 73.18.75. The rates of duty on certain tubes and pipes of iron or steel are amended.

R1594 BN 90.10. Tariff heading 90.10 is restated and the rates of duty on photocopying and thermo-copying apparatus and parts and accessories thereof are amended.

Industrial rebates

R1591 Item 311.12, 311.13 and 311.40. BN 59.08 and 59.12. (1) Provision is made for a rebate of the full duty less 15 per cent on certain impregnated, coated, covered, or laminated textile fabrics, for the manufacture of pressure-sensitive tape of a width not exceeding 30cm, polishing and grinding buffs and clothing. (2) Item 311.13/59.12 is extended so that impregnated and coated textile fabrics can now be used for the manufacture of not only polishing buffs but also grinding buffs. The extent of rebate of duty is also amended from not exceeding the MFN duty to full duty.

General rebates

R1593 Item 460.15. BN 73.18. The provision for a rebate of duty on welded tubes and pipes, of iron or steel, with an external cross-sectional dimension not exceeding 50mm, of a kind commonly used for the supply of water, steam or gas, is withdrawn.

Drawbacks and refunds of customs duty

R1595 Item 511.17. BN 55.07, 59.08, 70.20, 83.09, and 98.02. Provision is made for a drawback of the full duty on the goods mentioned if used in the manufacture of tents for export.

Inquiries: OTAR 01-248 5757 ext. 471/472/473/462.

Spain

Temporary import suspension. The Spanish *State Gazette*, 16 September 1976, published three royal decrees announcing temporary import duty suspensions as follows:

Decree 2151/76 announced an extension to the suspended import duty on bicycle tyres and inner tubes of rubber, tariff headings 40.11.B.3 and 40.11.C.2.D. The suspension will be in force for a three month period from 3 September to 2 December 1976.

Decree 2152/76 announced the suspension of import duty levied on the duty-free import quota for cold rolled steel sheets and plates suitable for the manufacture of bathtubs, tariff numbers 73.13.D.2.b and 73.13.D.2.c. The suspension will be in force for a three month period from 1 August to 31 October 1976.

Decree 2153/76 announced the suspension of import duty levied on the duty-free import quota for tin plate and tinned steel strip, tariff numbers 73.12.D.1 and 73.13.D.3.a The suspension will be in force for a three month period from 1 August to 31 October 1976.

Inquiries: OTAR 01-248 5757 ext. 462/471/472/473.

Liquefied ammonia and newsprint: home compensation tax. The Spanish *State Gazette*, 13 September 1976, published royal decree 2125/1976 announcing a temporary concession rate of 1.5 per cent home compensation tax on liquefied ammonia (tariff heading 28.16.A). This temporary reduction will only apply to liquified ammonia imported under the duty free quota established by Decree 449/1976.

The *State Gazette* also published royal decree 2124/1976 announcing a temporary concessional rate of 1.5 per cent home compensation tax levied on the duty free quotas of newsprint (tariff heading 48.01.A.1 and 48.01.A.2). This reduction is from 23 July 1976.

Inquiries: OTAR 01-248 5757 ext. 462/471/472.

Special vehicles for the transport of earths: joint assembly. In the *State Gazette*, 2 September 1976, the Spanish authorities published approval under the special system of joint assembly (see *Board of Trade Journal*, 11 August 1967) of the pro forma resolution for the manufacture of special vehicles for the transport of earths, rocks and minerals with three propelling axles. The parts, components, and anciliary material which may have to be imported for inclusion in the Spanish manufacture (which cannot be made locally) will be subject to a reduction of 95 per cent of the corresponding import duty.

On application a specific resolution could be approved by the Spanish Directorate of Tariff Policy given a technical and sufficiently detailed description of the parts, components, etc. to be imported with the reduced import duty, provided the total value of such parts do not exceed 12 per cent of the retail price. The pro forma resolution will remain in force until 2 September 1978.

British exporters interested in proposing themselves as potential partners should send details of their equipment to the British embassy, commercial department, Fernando El Santo 16, Madrid 4, who will make local inquiries on their behalf.

Inquiries: OTAR 01-248 5757 ext. 462/471/472/473.

Customs tariff modifications. The following modifications to the Spanish customs tariff have been notified:

Tariff no	Description	Import duty
12.01	Oil seeds and oleaginous fruit, whole or broken:	
B	Other oil seeds and oleaginous fruit:	
5	Copra	Free
6	Palm nuts and kernels	Free
15.07	Fixed vegetable oils, fluid or solid, crude, refined or purified:	
B	Solid oils	
1	Coconut oil	7%
2	Palm nut oil	7%
3	Palm kernel oil	7%
29.08.D	Ethylene glycol (glycol monoethyl ether)	1%
39.02.H.1	Polyvinyl-butyral and polyvinyl-formal	10%
39.02.G	Vinyl co-polymers, including acrylic co-polymers:	
1	Acrylonitrile co-polymers	18%
2	Ethylene-propylene co-polymer	1%
3	Ethylene-vinyl acetate co-polymer	20%
4	Other	36.5%
84.40.A	Clothes-washing machines and apparatus with a capacity up to 6kg of clothes:	
1	Automatic and semi-automatic	40%
2	Other	23.5%
B	Other washing machines:	
1	For clothes with a capacity over 6kg of dry clothes	20.5%
2	Other	20.5%
C	Dry-cleaning machines	20.5%
D	Drying machines and apparatus	20.5%
E	Bleaching, dyeing and finishing machines	20.5%
F	Ironing machines and apparatus	20.5%
G	Fabric reeling, folding or cutting machines	20.5%
H	Other	20.5%
I	Parts and spares, including plates and printing cylinders for printing textiles, etc.	20.5%
90.07	Photographic cameras and flash-light apparatus for photographic use:	
A	Photographic cameras:	
1	For graphic arts	20% Maximum 25,000 pesetas per unit
90.08	Cinematographic cameras and sound recorders, including those combined; projectors with or without sound reproduction:	
A	Cinematographic cameras and sound recorders, including those combined	1%
B	Projectors:	
1	With fitted-in sound reproduction:	
a	For film up to 16mm in width	9.5%
b	Other	31.5%
2	Fitted-in without sound reproduction:	
a	For film up to 16mm in width	9.5%
b	For film 16 to 35mm in width	40%
c	Other	14%
C	Photoelectric sound reproducers	1%
D	Parts, spares and accessories	31.5%
90.09	Projectors (not cinematographic); photographic enlargers or reducers:	
C	Photographic enlargers and reducers:	
1	For graphic arts	20% Maximum 25,000 pesetas per unit
91.09	Watch cases and parts of watch cases of heading 91.01:	
B	Other	1%
91.11	Other clock and watch parts:	
A	Platform escapements; sets of escape wheels; sets of anchors; sets of balances (assemblies on their staffs); regulators; finished springs, hair-springs, jewels and plugs for clocks and watches under tariff heading 91.01	1%
93.07	Bombs, grenades, torpedoes, mines, guided weapons and missiles and similar munitions of war and parts thereof; ammunition and parts thereof including cartridge wads; lead shot prepared for ammunition:	
A	Sporting munition, their parts including cartridge wads and lead shot prepared for ammunition:	
1	Rifle ammunition, metal	7%
2	Loaded cartridges	16.5%
3	Parts, including cartridge wads and lead shot prepared for ammunition	18.5%
B	Other:	
1	Projectiles and ammunition of war (including mines), their parts and spares	Free
2	Other projectiles and ammunition and parts	18.5%

The Complementary Note 3 (a) to Chapter 73 is modified to read as follows:
3 (a) Cast waste and scrap of iron and steel separate or mixed (when containing no more than 10% of casting in pressed packages or 2.5% in the other cases)

Inquiries: OTAR 01-248 5757 ext. 462/471/472/473.

CRE Commercial Relations and Exports Divisions
Tel. Direct dialling (see end of each notice)

OTAR Overseas Tariffs and Regulations Section
Tel. 01-248 5757 (extension at end of each notice)

United States

Poison prevention packaging. The *Federal Register*, 2 September 1976, published rules proposed by the Consumer Products Safety Commission for application procedures by states and local governments for exemption from pre-emption to conform to Federal standards of special packaging for household substances.

Written comments (five copies) should be sent by 4 October 1976 to Consumer Products Safety Commission, Washington DC 20207.

Inquiries: OTAR 01-248 5757 ext. 456/457/7312.

Registration and premarket notification of medical devices. The *Federal Register*, 3 September 1976, published proposed rules by the Food and Drug Administration, by which exporters to the USA would be required to register annually with the FDA and a minimum 90 day premarket notification lodged before commercial distribution in the country.

Comments (five copies) should be sent to The Hearing Clerk, Food and Drug Administration, Room 4-65, 5600 Fishers Lane, Rockville, MD 20852. Not later than 2 November 1976.

Inquiries: OTAR 01-248 5757 ext. 456/457/7312.

Ban on dipyrone for use in human drugs. The Food and Drug Administration is moving to withdraw registration approval of dipyrone, a sodium sulphonate derivative of aminopyrine, in drug products for human use on the grounds that this drug causes agranulocitosis, and in severe cases, death.

Petitions for a hearing (five copies) accompanied by substantiating data to warrant a hearing should be sent to The Hearing Clerk, Food and Drug Administration, Room 4-65, 5600 Fishers Lane, Rockville, MD 20852, by 4 October 1976.

Inquiries: OTAR 01-248 5757 ext. 456/457/7312.

Ingredient labelling of infant foods. The *Federal Register*, 7 September 1976, published rules proposed by the Food and Drug Administration requiring infant food labels to indicate percentage declaration of ingredients if above 5 per cent or more in the finished food.

Written comments (five copies) should be sent by 8 November 1976 to Food and Drug Administration, 5600 Fishers Lane, Rockville, MD 20852.

Inquiries: OTAR 01-248 5757 ext. 456/457/7312.

Uruguay

Utility models and industrial designs. A new law, 14.459, on utility models and industrial models and designs came into effect on 4 August. This new law embodied the existing provisions of law 362/972 of May 1972 for industrial models and designs, but sets out new criteria for utility models. It appears that it is possible that applications already pending under law 362/972 or law 10.089 of December 1941, can be re-applied for under the new law, with the authorisation of the Industrial Property Board, if under the criteria in the new law this would be advantageous to the applicant.

A copy of a translation of the new law is available for inspection in the Chancery House Annexe of the Science Reference Library (Holborn Division), Chancery House, Lower Ground Floor, Chancery Lane, London WC2A 1AY.

Venezuela

Duty increases on some television receivers. Decree 1705 of 3 August 1976 modifies tariff sub-heading 85.15.04.00 as follows:

Tariff number	Description	Duty *ad valorem* cif
85.15.04.00	Television receivers, including those combined with radio receivers, or with apparatus for sound recording or reproduction:	
01	For domestic use, with diagonal measurement of screen up to 12.7cm (5 in)	200%
02	For domestic uce, with diagonal measurement of screen more than 12.7cm (5 in), black and white	200%
03	For domestic use, with diagonal measurement of screen more than 12.7cm (5 in), colour	200%
99	Other	200%

It also establishes the following minimum values for monochrome television receivers:

Up to 31cm (12 in)	Bolivares 250.00 cif
Larger than 31cm (12 in) up to 51cm (20 in)	Bolivares 350.00 cif
Larger than 51cm (20 in)	Bolivares 600.00 cif

Inquiries: OTAR 01-248 5757 ext. 474/476.

Yorkshire velvets for the White House

Rich red wine coloured velvets have been presented as a gift to the White House for the bicentennial celebrations by Lister and Co Ltd of Bradford. The velvet was presented to Clement E. Conger, curator of the White House (right) by Lord Bridges, Minister (Commercial) of the British embassy in Washington (left). (Photo: the White House).

Zaire

Zairianisation and nationalisation. The official newsagency has published details of decisions taken by the Committee of Stabilisation which met on 17 September and was presided over by President Mobutu.

Small businesses, stock farms and plantations taken over by Zairian nationals remain their property unless the management of such businesses has become run down.

Certain activities of national interest, notably mines and energy are reserved for the state.

Former owners of Zairianised or nationalised businesses are authorised to possess up to 60 per cent of the capital of their businesses while the remaining 40 per cent can either be subscribed by Zairian shareholders who may freely be chosen by the former owners or be the object of a public issue tending to promote popular shareholding.

After a complete study of needy cases of former owners of Zairianised businesses, the former owners will have their property given back on condition that they themselves choose Zairians to whom they may offer a 40 per cent share of the businesses.

Inquiries: CRE 01-215 5334.

Overseas trade exhibitions

High hopes of good business from Photokina

From Graham Longdon-Griffiths, second secretary (commercial), British embassy, Bonn

This year was the second time that the world fair of photography in Cologne, Photokina, was open to the trade only. The success of the first trade-only show in 1974 strengthened the organisers in their resolve to continue its development as a specialised trade fair. Exhibitors, including 47 represented firms, totalled 916, an increase of 11 per cent on 1974. Of these 60 per cent came from outside the Federal Republic, and Britain, with 71 exhibitors and 19 represented firms, occupied second place close behind the United States and well ahead of the Japanese and French.

In opening this the fourteenth Photokina on 10 September, the Federal German Minister of Economics, Dr Hans Friderichs, mentioned that the process of German economic recovery was no longer as marked as it was at the beginning of the year. He went on to say that an economy such as Germany's, which is so export-orientated, was bound to be particularly hard hit by growing trade protectionism. This particularly applied to the photographic industry which made two-thirds of its sales abroad.

New products timed to make their debut at Photokina are rare. The emphasis is on developments and refinements of existing products. Notable interest was shown in pocket cameras with built-in zoom lens and with a reflex viewfinder; in super-8 cine cameras incorporating a microphone transmitter on the magnetic sound strip of the film and with a large frequency response permitting sound recordings of almost hi-fi quality; in the latest products for tape-slide shows and multivision, particularly in connection with control systems; in fully automatic photo-finishing equipment capable of producing up to 8,000 prints per hour; and in the latest developments in the photographic chemical field.

A joint-venture group of 63 firms sponsored by the British Photographic Export Group and the British Overseas Trade Board occupied a large group stand. Inquiries made as the seven-day fair was drawing to a close revealed that, with very few exceptions, every exhibitor expected to exceed sales made in 1974 when it is thought that a total of more than £5 million worth of business was done. However, it is impossible to give anything like an accurate estimate as exhibitors come to Photokina to meet their established customers and agents. Consequently, while firm orders are few, participants stated that they would be extremely happy if preliminary inquiries eventually resulted in 10 per cent of firm business.

Some firm orders were placed. Shackman instruments, with their range of instant result multishot cameras, reported orders totalling $60,000 for cameras for passport photos and identification systems, with an estimate of a further $150,000 to come. Photax received an order worth £20,000 sterling from Stuttgart for lighting equipment. Firm orders for 14 of their hydraulically-operated 4050 power presses, new to Photokina, were taken by Ademco Ltd, eight of them destined for Arab states. Neilson Hordell Ltd, showing movie animation and cartoon equipment, concluded business with Finland and Holland. Lipsner-Smith took orders for their silver recovery units. De Vere, who received the Photokina obelisque from the fair authorities in recognition of their tenth appearance at the fair, took orders to the tune of £100,000 for their professional equipment and Propak Photographic Equipment Ltd sold automatic processing machines to be delivered over a period of three years to their United States' distributor and representing three times the value of their total turnover last year.

Again this time, many British exhibitors will be returning home to find ways to increase production to meet demands.

Useful contacts made at non-destructive testing exhibition

From J. A. Edmunds, consul (commercial), British consulate-general, Marseille

Thirteen hundred delegates, representing experts and researchers from 33 different countries, attended the eighth international conference on non-destructive testing which was held in the Palais des Festivals, Cannes, from 6 to 10 September. This event takes place every three years and the next conference will be hosted by Melbourne in 1979.

Each conference is complemented by a specialised high-technology exhibition which provides an ideal opportunity to display the most modern equipment developed by the manufacturers of products used in non-destructive testing. A total of 58 companies from France, Britain, Sweden, Germany, Japan, Holland, Spain, Denmark, the United States, Belgium, Switzerland, and Italy took part in the exhibition.

Of these 58 companies, 12 represented Britain in a joint venture between the British Overseas Trade Board and the British Institute of Non-Destructive Testing. The exhibition is not open to the general public and therefore interest in the equipment is limited to conference delegates and other exhibitors.

No actual orders were taken but the number and level of inquiries received, and the contacts made, proved the usefulness of active participation in this exhibition.

Footwear on show in Montreal

From S. Y. Dawbarn, consul-general, British consulate-general, Montreal

Montreal was the venue of the Canadian international footwear exposition which took place from 29 to 31 August, under the auspices of the Shoe Manufacturers' Association of Canada, the Shoe and Leather Council of Canada and the Canadian Shoe Retailers' Association. As in previous years, the exhibition was open to the trade only.

Six British manufacturers, the British Shoe Corporation Footwear Supplies Ltd, Ward White Footwear Overseas Ltd, Dunkelman and Son Ltd, Norvic Footwear (Overseas) Ltd, Bally Shoe Company Ltd and Start-Rite Shoes Ltd, took part in a BOTB joint venture, sponsored by the British Footwear Manufacturers' Federation. The site, 1,070 sq ft in size, was in the same location and of basically the same design as last year. The products displayed by the group included men's, women's and children's footwear along with a range of footwear accessories. Of the six participants only one, Norvic Footwear (Overseas) Ltd, was a newcomer to this market.

The show as a whole was a little smaller this year and the number of buyers was said to be slightly down. However, the UK participants transacted a satisfactory volume of business and felt that a continued presence at this show is worth while.

British companies wrap up orders at Japan's packaging exhibition

From Dennis Parsons, second secretary (commercial), British embassy, Tokyo

'Tokyo Pack', the principal exhibition for packaging machinery and materials in Japan, is held every two years at the Tokyo international trade fair grounds and covers the whole range of packaging materials, processes and systems, machinery and food processing and packaging items. The event is gaining a reputation in world packaging circles and is becoming a major fair for the world's leading packaging companies.

The sixth 'Tokyo Pack' was held from 3 to 8 September, and 336 exhibitors from 10 countries took part. This included a group of five companies taking part in a joint venture under the sponsorship of the Institute of Packaging. Well over 100,000 people visited the exhibition, and the organisers estimate that inquiries valued at more than Y110,000 million were received by the exhibitors.

Of the British exhibitors, European Machine Systems Ltd has been in the Japanese market for only a few months, but already their roll-feed, pressure-sensitive, labelling machines have attracted much attention. This company had a particularly good exhibition, with a confirmed order from Japan's largest cosmetics company and a number of valuable inquiries from other users. There are good prospects for this advanced machinery in Japan and, once the initial breakthrough is made, this company can expect very good business from Japan. In addition, they were successful in finding an agent for their tablet counting machinery.

Wright Machinery Co Ltd were very much encouraged as prospects for the sales of their snack food processing and packaging systems look very good. An order was taken for a display machine and this could provide a breakthrough into the market where they already believe they have a technical lead.

C. E. King Ltd is a company already well known in Japan and the exhibition was an opportunity for them to promote sales of their tablet packaging and counting systems.

The Metal Tray Manufacturing Co Ltd has been selling prestige decorated trays in Japan for a number of years and was able to use the exhibition as an opportunity to expand sales in Japan. They were also able to introduce their new range of decorated metal boxes for confectionery and biscuits which attracted considerable interest.

The joint venture group was led by Mr Hardwick of Waddington and Duval (Holdings) Ltd, whose company manufactures a range of plastic industrial taps for incorporation into plastic containers. The company was able to conclude an agency arrangement with a major Japanese plastic blow-moulding company which is an established customer of the British company.

Speaking on behalf of the group as a whole, Mr Hardwick said that any serious British company could hardly afford to ignore the Japanese market. He said that the five companies taking part in the joint venture had all achieved the objectives which they had set themselves and all were well pleased with their participation. Japan still enjoys a growth rate above the average for industrial countries and will continue to offer opportunities to firms which take the trouble to come and work for them.

A packaging-conscious nation

As consumers the Japanese are perhaps the most packaging-conscious nation in the world. The annual gift-giving seasons of 'ochugen' in mid-year and 'oseibo' at new year are long-established traditions, and it is often remarked that the packaging of these gifts is as important as the gift itself. Hence the often ornate packages housing a wide range of consumer goods – from jewellery and cosmetics to fruit and vegetables – and the large staffs employed by department stores who must be adept at gift-wrapping complete with ribbon and bow.

The Japanese packaging industry has benefited from this demand. The Japanese market for packaging machinery and materials has shown rapid growth at around 20 per cent in recent years, although the slowdown in economic activity over the past two years reduced this pace somewhat. Nevertheless this represents a large and growing market for British manufacturers, especially as the outlook for machinery sales is beginning to look brighter. Furthermore, the Japanese industry is not technologically advanced in all areas and still looks overseas for imports of technology and advanced machine concepts.

Copenhagen store promotion will bring long-term benefits

From J. R. Cowling, first secretary (commercial), British embassy, Copenhagen

'It should have lasted another week – things went so well.' This was how one of Magasin's directors summed up the British promotion held in the Magasin du Nord department store in Copenhagen and four branches elsewhere from 26 August to 4 September.

The promotion concentrated on quality clothing, footwear, foodstuffs and beverages. Its slogan was 'Good, Better, British' and its motif, the traditional bowler. It got off to a rousing start with the band of the 17/21 Lancers playing in the square outside the main store when British ambassador Miss A. M. Warburton arrived at the main store in Copenhagen to open the proceedings.

As a curtain-raiser, Magasin had arranged an exhibition of Lord Snowdon's photographic work and this proved an enormous success – 62,000 people visited the exhibition in the main store alone and Lord Snowdon had a busy time autographing his book, 'Assignments'.

Jaeger and this year's winners of the Eurovision Song Contest, the Brotherhood of Man, took equal honours at a fashion show held in a leading hotel in each city, with the exception of Aarhus where the show was held in a stately home near the city. Fortnum and Mason's tea with cucumber sandwiches, scones and English strawberry jam were served to an appreciative audience.

But what about business? Foodstuffs sold exceptionally well. Many items were completely sold out. There was, for example, so much interest at the main store in Copenhagen in wine from English vineyards imported into Denmark for the first time that stocks were completely exhausted before the end of the promotion. To coincide with this promotion, Magasin have budgeted to spend something approaching an additional £1 million over the last six months of the year in comparison to the same period last year. And they also consider that the promotion will have a beneficial effect on their long-term purchasing programme.

Do you use statistics?

The Government Statistical Service (GSS) prepares a wide range of reliable and detailed figures on the United Kingdom. It is usually worth checking to see if what you want is available from them. You can see many government statistical publications at your local public library, buy them from HMSO, or refer to the comprehensive collection held at the Statistics and Market Intelligence Library, Export House, 50 Ludgate Hill, London EC4N 7HU (tel. 01-248 5757 ext. 368).

A free pamphlet, *Government Statistics – a brief guide to sources*, gives up-to-date contact points in departments for further information. You can obtain copies from regional offices of the Department of Industry or by writing to the Central Statistical Office Press and Information Service, Great George Street, London SW1P 3AQ.

UK fashions win praise at Düsseldorf

From H. C. von Massenbach, vice-consul (commercial), British consulate-general, Düsseldorf

Over £1 million worth of export orders had been taken by British firms at the close of the Düsseldorf fashion fair, which closed on 15 September. From 12 to 15 September, Düsseldorf truly upheld its claim to be one of Europe's greatest fashion centres, attracting some 17,000 exhibiting firms and nearly 37,000 trade buyers from 24 countries to the 110th Igedo-international fashion fair and the third Igedo-Dessous. The latter took place concurrently and is now established as a major international annual event for the fashion industry and trade, specialising in lingerie, corsetry, swim and beachwear and homewear.

While German and foreign exhibitors in the 110th Igedo were satisfied with the advance order business taken for the spring and summer 1977 and with the particularly strong last-minute demand for winter fashion garments, the third Igedo-Dessous, covering 17,000m², with 300 exhibiting firms – 153 of them from 18 foreign countries – was undoubtedly the main attraction for the visiting trade. Over 18,000 trade buyers attended the Dessous and 45 per cent were from foreign countries. The largest foreign representation after France, with 41 firms, was from Great Britain with 22 firms in the BOTB joint-venture scheme under the sponsorship of the clothing export council. This was the largest national stand.

It was the British exhibits which won the special interest of the trade with buyers crowding exhibitors' stands at almost all times throughout the four days of the fair. In addition to the numerous trade inquiries from Scandinavia, Finland, Holland, Belgium and other countries even as far afield as North America and the Middle East, it was the very positive response of the German trade which contributed most to the undoubted success of the British exhibitors. Buyers from the German store groups, buying organisations, fashion houses and the specialist retail trade were expecially captivated by the most attractive displays of nightwear, lingerie, swim/beachwear. The corsetry collections won special appeal not only for their quality of finish and price but equally for their originality in design and styling and use of fabrics.

The British exhibitors were encouraged by the very positive reaction of the German trade in particular and were unanimous in voicing their intention to intensify their efforts to exploit fully the unquestioned market potential in the Federal Republic of Germany.

Strong British presence at Porto Alegre show

From L. Bevan, counsellor (economic), British embassy, Brasilia

Agricultural links between Britain, a major importer of foodstuffs, and Brazil a major agricultural exporter have been growing steadily over the past few years and this year's International Agricultural Show at Porto Alegre, provided the focal point for a concentrated British agricultural presence.

The Porto Alegre show, which took place from 22 to 30 August, is the major event in the Brazilian agricultural trade fair calendar and one of the most important in Latin America as a whole. Since 1972 it has been open to international exhibitors every second year and Britain has participated regularly with joint ventures with the British Agricultural Export Council (BAEC), particularly on the livestock side. This year, demands on space led to restrictions on the number of animals which exhibitors, both foreign and national, were allowed to show. Because of this and of some uncertainty about the prices which animals would fetch, BAEC decided not to participate in a joint venture but to maintain continuity by manning an information stand.

Fred Peart, then Minister of Agriculture, Fisheries and Food, had been invited by the Brazilian Minister of Agriculture, Alysson Paulinelli, to visit Brazil at the time of the show but was prevented from coming by Britain's drought problem. His place was taken by Edward Bishop, Minister of State at the ministry.

In the course of a 10-day programme Mr Bishop visited most of Brazil's main agricultural areas, and met most of the top people in agriculture in Brazil, both governmental and private, at federal and state level. He saw what the Brazilians themselves are doing and the contribution which a number of British companies are making towards the country's agricultural development, either through their subsidiaries or by joint venture operations.

Mr Bishop visited the show on its opening day when the traditional ceremony was presided over by President Geisel. With a British party which included Sir Richard Trehane, the president of the Milk Marketing Board (who, like Mr Bishop, had timed his first visit to Brazil to enable him to see the show), Mr Bishop was then shown round by Mr Paulinelli and Getulio Marcantonio, the Rio Grande do Sul State Secretary of Agriculture.

The tour included calls at the stand of IPB Comércio de Sementes Ltda, a subsidiary of the Nickerson Group, where the party saw a visual presentation of the effort which the company is making in Brazil to introduce improved seeds for forage grass, legumes, wheat, soya, maize and sorghum; and at the stand maintained by the local agents of the Milk Marketing Board and British Semen Exports Ltd whose sales of semen to Brazil have grown considerably in the last few years.

Mr Bishop and his party were greeted at the British information stand by Lord Glenkinglas, chairman of BAEC, and met members of the nine-man BAEC mission which he had led to Brazil to coincide with the show. The mission members used the information stand as a meeting place for discussions with potential Brazilian customers and other contacts, several of them taking orders and inquiries there.

Like Mr Bishop, Lord Glenkinglas, members of his mission and Sir Richard Trehane all had discussions with important federal and state agricultral officials, trace and breed associations and private companies in the course of their visits. This broad front strategy achieved considerable success. Some immediate business was done by mission members and the prospect of participation in major projects was opened up. On the Brazilian side it was made clear that they wanted British agricultural technical know-how and the equipment to carry it out. The Brazilians also want to see more British involvement in joint ventures in agro-industries, as well as more British imports of Brazilian agricultural products.

Edward Bishop, Minister of State, Ministry of Agriculture, Fisheries and Food at the Porto Alegre show. On his right is Alysson Paulinelli, Brazilian Minister of Agriculture.

Overseas trade export services

North Africa-UK container link-up

A number of new container services from the UK to various destinations in North Africa via Trieste are now being offered by Bahr, Behrend with their partners, Adriatic Container Services of Trieste.

Countries served are Egypt, Libya and Tunisia, and containers are routed from Harwich to Trieste and then by either container vessel or roll-on/roll-off ship to the port of destination.

The service to Egypt is via Alexandria with sailings from Trieste every 18 days, and forwarding can be arranged to Cairo, Suez, Port Said, and other destinations in addition to Alexandria.

The service to Libya is a weekly service to Tripoli with a transit time of three days and a fortnightly service to Benghazi with a transit time of six to seven days.

Tunisia is served by a weekly service from Trieste by roll-on/roll-off vessel with a transit of four days.

Both 20 ft and 40 ft equipment is available and also a number of open-top containers of both types.

Bahr, Behrend believe that this service will be of considerable interest to shippers because there is no direct container service operating from the UK to Alexandria at the present time. They feel that these services will provide useful additional capacity to the limited number of container services currently operating.

Autotelex to Trinidad and Tobago

Britain's telex links with Trinidad and Tobago are now automatic. Trinidad and Tobago – the most southerly of the West Indies – is the eighth Caribbean country to get autotelex from the UK. The others are the Bahamas, the Dominican Republic, Haiti, Jamaica, the Netherlands Antilles, Puerto Rico and the US Virgin Islands. There are now 101 countries which Britain's 60,000 telex users can reach direct.

British businesses have been making about 1,600 calls a month to Trinidad and Tobago, connected by the operator. Major users include the sugar and cocoa industries, and 'invisible export' interests.

Autotelex calls to Trinidad and Tobago cost 75p a minute, with a one-minute minimum.

Can you help exporters?

If your company provides services for exporters, in, for example, the packing, forwarding, shipping air and sea services, banking, translation or any other related field we would be glad to have news of any new developments, together with a good newsworthy photograph. This 'Export Services' feature will be published at regular intervals in future as part of the service which *Trade and Industry* provides in its Overseas Trade section. Material should be addressed to the Overseas Editor, *Trade and Industry*, Room 439, 1 Victoria Street, London SW1.

Advertisers who wish to be associated with this feature should contact Colin Beadle at T. G. Scott's on 01-242 6264.

New groupage container service from UK to Canada

McGregor Cory Cargo Services, part of the Ocean Group, are starting a new weekly container groupage service between the UK and Canada, as from today (1 October). Destinations will be Montreal, Toronto and Vancouver.

In this new venture, McGregor Cory Cargo Services are providing groupage container facilities for shippers and consignees in both countries, and emphasis will be given to keeping customers fully informed of the position of their goods from the time of arrival at the company's depot in Stratford (east London) to delivery at final destination.

The Stratford depot will be the departure point for UK freight and documentation. McGregor Cory can also arrange collection of cargo from customers' premises, if required.

In addition to international freight forwarding, including European groupage operation, the company also operates warehousing and cold storage facilities in the UK and certain European ports. Other interests include commodity control, road haulage and an overseas parcels service. McGregor Cory Cargo Services has offices in major centres such as London, Birmingham, Avonmouth, Manchester, Liverpool and Southampton.

Two-way groupage service starts to southern Germany

British Commercial Transport Co Ltd are to operate a direct two-way groupage service with driver-accompanied 12m trailers from Manchester to Stuttgart, Nuremburg and Munich. A Manchester to Frankfurt service was started by BCT some time ago.

New service

The new service will be operated by BCT in association with Pracht, their German agent, and this means that British exporters can call on a whole range of other services, such as warehousing facilities and distribution for their goods throughout southern Germany. Initially, the new service will operate once a week but it is planned to increase the frequency in the near future.

Complete range

BCT can arrange collection of customers' goods anywhere in the north of England. Alternatively, they will accept delivery of goods at the newly-opened warehousing and distribution depot at Walkden, near Bolton.

BCT, who are celebrating a hundred years in freight forwarding this year, have offices in major centres in the UK and in the Far East, and have a network of agents throughout the world. They offer a complete range of service to exporters and importers, including warehousing, distribution, insurance, export packing, air charter and personal car exports.

Increased demand leads to more Channel freight sailings

Extra autumn and winter roll-on/roll-off freight sailings between Southampton and Le Havre are being introduced by Townsend Thoresen to cope with increased demand.

A new Saturday overnight service from Southampton at 23.00 and additional day sailings from both ports on Sundays, are to be run on the cross-Channel route from 9 October to 19 December 1976.

Overnight crossings

These increased sailings mean that there will be overnight crossings in each direction seven days a week in addition to the new Sunday services which leave Southampton at 12.00 and Le Havre at 11.30.

Dial once for Skyload

Under the latest phase of streamlining the airline's cargo operation, exporters and shippers only have to dial one number 01-759 2388 to reach Skyload, British Airways Heathrow cargo facility.

The new integrated cargo reservations office switched to the new number on 19 September.

Skyload operates 24 hours a day and the staff are trained to give expert information on all aspects of exports including advice on the first service available for consignments. It is expected that Skyload will be dealing with well over 1,000 calls a day.

In the past shippers have had to ring one of two numbers according to the destination of their shipments. Now British Airways say, the task is made much easier with the two systems merged into one under the name of Skyload for worldwide reservations.

Pandair reorganise French operation

Pandair air-freight forwarders, has reorganised its operations in France as a result of an exclusive new association with S. A. Collard et Cie.

Under the terms of the agreement, Collard will act as break bulk, handling, customs clearance and sales agents on behalf of Pandair branches throughout the world.

Packed for Moscow journey

The photograph shows one of the large packing cases measuring 13m by 3m by 5m high and weighing 75 tons, containing part of the aircraft tyre, wheel and brake dynamometer on route from Chesterfield to Hull by road for forward shipment to Moscow. The packing and transport to Hull was handled by Constantine-Lloyd Ltd of Manchester, a member of the Constantine Group. The order for the dynamometer, valued at £4 million was placed with Vickers Engineering Group Design and Projects Division and was manufactured by Markhams of Chesterfield.

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ENCIRCLE TI 211 ON PAGE 62 FOR FURTHER INFORMATION

Statistics

The economy: selected indicators

Series are seasonally adjusted except where shown otherwise

	Gross domestic product (average estimate)	Consumers' expenditure	Fixed capital expenditure			Changes in stocks				Balance of payments		
			Total	of which: Manufacturing industry	of which: Distributive and service industries excl. shipping	Total	of which: Manufacturing industry	Wholesalers	Retailers	Current balance	Visible balance	invisible balance
	at 1970 prices		at 1970 prices			at 1970 prices				at current prices		
Base of index Series in Stock level at end-1975	1970	£ million	£ million			£ million 18,054	10,399	1,807	1,976	£ million		
1970	100	31,644	9,380	2,130	1,799	425	325	68	−14	733	−25	758
1971	102	32,505	9,544	1,991	1,930	70	−148	52	22	1,084	280	804
1972	104	34,402	9,754	1,739	2,071	−18	−145	48	15	154	−702	856
1973	110	35,935	10,008	1,872	2,362	1064	404	102	382	−736	−2,334	1,598
1974	110	35,612	9,805	2,024	2,251	597	666	81	−111	−3,347	−5,220	1,873
1975	108	35,374	9,767	1,737	1,964	−648	−392	−111	−23	−1,673	−3,204	1,531
1973 4th qtr	109	8,986	2,513	467	615	205	91	32	47	−395	−949	554
1974 1st qtr	106	8,853	2,532	510	591	−176	−21	18	−38	−822	−1,288	466
2nd qtr.	111	8,814	2,339	502	562	295	197	43	19	−858	−1,355	497
3rd qtr.	112	8,956	2,418	501	548	373	358	3	−39	−763	−1,242	479
4th qtr.	111	8,989	2,516	511	550	105	133	17	−53	−904	−1,335	431
1975 1st qtr.	110	8,989	2,490	471	497	−176	18	−31	−38	−452	−852	400
2nd qtr.	108	8,851	2,394	444	495	−254	−105	−54	−66	−366	−681	315
3rd qtr.	107	8,726	2,496	416	496	−156	−234	−29	38	−561	−989	428
4th qtr.	108	8,758	2,387	406	476	−62	−70	4	43	−294	−682	388
1976 1st qtr.	109	8,866	2,457	402	460	−33	31	23	12	−39	−473	434
2nd qtr.	108 p	8,789 p		411	475		−130	−22	−55	−553	−1,040	487
% change last 2 qtrs. on prev. 2 qtrs.	+1.2	+0.7	−0.9	−1.1	−3.8							
on a year earlier	−0.2	−1.0	−3.2	−11.1	−5.7							

	Industrial production		Personal expenditure		Prices and costs (NOT seasonally adjusted)					Labour (UK)			Visible Trade (Volume)	
	Total all industries	Total manufacturing industries	Retail sales	Cars: new registrations	Retail prices	% increase on a year earlier	Wholesale prices: all manufacturing industry: basic materials and fuel used	Wholesale prices: all manufacturing industry: manufactured products: home sales	Basic hourly wage rates of manual workers (all industries and services)	Unemployed excluding school leavers and adult students: mid-month count	Unemployed excluding school leavers and adult students: % of total employees	Unfilled vacancies for adults: mid-month count	Export	Import
	at 1970 prices		at 1971 prices	monthly averages									On a balance of payments basis: at 1970 prices	
Base of index £m in base year Series in	1970	1970	1971 15,895	thousands	Jan. 1974		1970	1970	July 1972	thousands		thousands	1970 7,907	1970 7,932
1971	100.4	99 6	100.0	108.5	153.4†	9.4	104.6	109.0	88.9	775.8	3.4	130.9	106.7	104.2
1972	102.7	102.4	105.8	138.6	164.3†	7.1	109.2	114.8	101.4	854.9	3.7	147.3	106.6	116.3
1973	110.2	110.8	110.7	137.1	179.4†	9.2	144.5	123.2	115.6	611.0	2.6	307 0	121.8	133.9
1974	106.3	108.1	109.9	102 8	108.5	16.0	215.3	152.0	138.7	599.5ø	2.6ø	30..2ø	130.1	135.2
1975	101.0	101.4	107.9	97.2	134.8	24.2	235.4	188.7	179.8	929.0	3.9	148.2ø	124.9	125.6
1974 3rd qtr.	108.4	109.9	111.2	107	110.2	17.0	212.9	156.1	144.0	613.7	2.6	308.7	133.4	136.4
4th qtr.	105.0	105.8	111.3	97	115.1	18.2	222.1	164.9	153.5	..	..	..	126.5	133.0
1975 1st qtr.	104.4	105.9	111.3	108	122.0	20.3	220.9	176.0	163.6	737.8	3.1	..	128.9	125.4
2nd qtr.	100.1	100.4	108.9	94	133.6	24.3	225.6	186.3	176.3	847.4	3.6	164.4	122.6	122.2
3rd qtr.	99.4	99.5	105.5	103	139.4	26.6	239.3	193 4	185.5	1,000.0	4.2	133.6	120.0	127.4
4th qtr.	100.3	100.0	105.8	84	144.2	25.3	256.1	199.1	193.8	1,132.1	4.8	113.6	128.3	127.2
1976 1st qtr.	101.5	101.5	107.3	106	149.4	22.5	266.5	206.9	205.5	1,223.2	5.2	115.5	131.6	124.0
2nd qtr.	102.2	103.3	106.7	106	154.9	16.0	292.6	214.4	212.4	1,246.5	5.3	119.6	137.1	137.1
3rd qtr.										1,307.8 p	5.5	124.7 p		
1975 Sept.	100.0	100.1	106.1	120	140.5	26.6	243.2	194.9	186.0	1,034.4	4.4	131.1	121.9	123.1
Oct.	100.6	100.5	104.8	85	142.5	25.9	252.3	197.0	187.5	1,088.7	4.6	118.9	130.5	128.9
Nov.	100.7	100.5	105.2	81	144.2	25.2	256.7	198.9	195.6	1,133.0	4.8	111.8	123.4	128.0
Dec.	99.6	99.0	107.0	87	146.0	24.9	259.5	201.5	198.2	1,174.6	5.0	110.1	130.9	124.7
1976 Jan.	101.0	101.6	109.8	115	147.9	23.4	261.5	204.8	202.1	1,210.5	5.1	111.1	131.5	125.1
Feb.	101.9	101.4	107.1	101	149.8	22.9	263.9	207.3	206.4	1,232.4	5.2	113.5	128.4	127.0
Mar.	101.7	101.6	105.5	101	150.6	21.2	274.2	208.6	207.9	1,226.6	5.2	122.0	134.9	119.9
Apr.	102.1	102.9	108.5	118	153.5	18.9	286.3	211.5	210.1	1,233.7	5.2	123.9	134.8	134.0
May	104.1	105.9	105.7	112	155.2	15.4	292.0	214.8	211.4	1,250.0	5.3	120.6	138.2	139.7
June	100.4	101.0	106.1	88	156.0	13.8	299.6	217.0	215.7	1,255.7	5.3	114.3	138.4	137.7
July	101.9	103.4	108.3	87	156.3	12.9	301.6 p	219.9 p	217.6	1,294.6	5.5	117.6	129.8	140.0
Aug.				115	158.5	13.8	302.9 p	223.4 p	217.7 p	1,309.4	5.6	127.5	132.3 p	131.7 p
Sept.										1,319.3 p	5.6	129.0 p		
% change latest 3 months on prev. 3 months	+0.2	+1.4	−0.2	−12.4	+2.5		+6.1	+4.0	+3.4	+4.9		+4.3	−2	+4
on a year earlier	+2.5	+3.6	+2.2	+3.6	+13.5		+28.7	+15.0	+17.7	+30.8		−6.7	+12	+7

p Provisional pe Preliminary estimate † Base of index Jan. 1962 = 100 .. not available ø Average of 11 months

Inquiries: 01-215 3453

Activity in the chemicals industry

Symbols used in all statistical tables

.. not available	r revised
— nil or less than half	• five week period
the final digit shown	• fifty-three week
p provisional	period

Output

The level of output in the first half of the year was higher than had previously been estimated and now shows a rise of 7½ per cent compared with the average for 1975 as a whole. This rise, equivalent to an annual rate of 10 per cent, taken with the continued recovery expected for the remainder of the year, suggests that output in 1976 as a whole could also rise by about 10 per cent compared with 1975. The National Institute for Economic and Social Research, in their August 1976 review, forecast a rise in chemicals output of 8¼ per cent in 1976 and again in 1977. The institute's figure for 1976 now seems a little low but that for 1977 could well be achieved.

Most of the increase in output in the second quarter came from the buoyancy of exports as home demand remained fairly sluggish. There are however encouraging signs of an upturn in home demand although the main thrust may well not come until next year.

Trade

The volume of exports of chemicals was virtually unchanged in the second quarter after the very strong rise of 16 per cent in the first quarter of 1976. There has been some hesitation in the recovery of overseas demand but prospects in Europe and the United States are expected to improve as the year progresses and further increases in export volume seem likely.

The fall in the volume of chemical imports, anticipated in the previous article, did not occur in the second quarter when there was a rise of 4½ per cent. In the first half of this year the volume of imports, expressed as a percentage of home demand, returned to a level slightly higher than that of 1974. Such an increase is the more surprising in view of the extent of below capacity working in the chemical industry.

Prices

Output prices rose by 3½ per cent in the second quarter of 1976, following a slightly steeper rise in the previous quarter. Prices have risen faster in the first half of this year than in the last half of 1975; nevertheless the rise of 15 per cent in 12 months to June was much the same as the increase in the retail prices index over the same period.

Prices of materials and fuels purchased by the chemicals industry rose sharply by 7 per cent in the second quarter; this was more than double the increase in the previous quarter and owed a good deal to the fall in the value of sterling. The price (unit value) of imports of chemicals also rose sharply by 10 per cent in the second quarter of this year.

Capital expenditure

Revised figures show that the volume of capital investment by the chemical industry rose by 20 per cent in 1975 after a rise of 16 per cent in 1974, ie somewhat less than had originally been estimated. In the first half of 1976 the quarterly level of investment was some 6 per cent below the average level in 1975. This suggests that forecasts of the Department of Industry's Investment Intentions Inquiry, which had indicated a fall in chemicals investment in 1976, may be closer to the final outcome for 1976 than the Chemical Industries Association (CIA) Investment Intentions Survey (published in March) which suggested that investment would rise again in 1976. In their latest economic bulletin the CIA suggest that there may have

TABLE 1 Index of production

Index numbers 1970 = 100, seasonally adjusted

MLH		1971	1972	1973	1974	1975	1975 1st qtr.	1975 2nd qtr.	1975 3rd qtr.	1975 4th qtr.	1976 1st qtr. p	1976 2nd qtr. p	% change last quarter on: Previous quarter	% change last quarter on: Same quarter a year earlier
271	General chemicals	100.7	104.5	119.2	134.9	114.0	120.6	106.8	108.8	119.8	123.9	129.6	5	21
271/1	Inorganic chemicals	101.1	99.2	109.2	114.7	95.7	107.4	92.5	91.0	91.8	98.3	107.6	9	16
271/2	Organic chemicals	102.8	115.3	137.6	165.5	136.5	137.7	124.2	129.1	155.1	155.5	167.2	8	35
271/3	Other chemicals	97.8	97.7	108.9	121.4	108.2	115.5	102.4	105.0	109.7	115.7	109.9	−5	7
272	Pharmaceutical chemicals and preparations	107.0	115.7	136.4	145.9	148.4	151.8	151.9	141.2	148.6	151.0	153.1	1	1
273	Toilet preparations	105.4	112.9	126.1	139.2	133.8	141.6	131.3	132.1	130.1	138.1	133.0	−4	1
274	Paint	103.0	110.1	120.9	115.4	113.5	112.0	116.5	113.6	111.9	115.1	118.9	3	2
275	Soap and detergents	99.1	102.5	105.8	115.4	110.2	106.2	112.6	107.5	114.4	108.6	111.5	3	−1
276/1	Synthetic resins and plastics materials	101.2	110.8	126.6	119.4	101.0	98.2	95.6	99.5	110.6	123.2	121.2	−2	27
276/2	Synthetic rubber	90.5	100.0	118.2	108.7	84.1	96.2	80.8	66.0	93.4	97.0	110.8	14	37
277	Dyestuffs and pigments	97.0	106.7	112.2	118.7	98.1	105.5	93.1	94.6	99.2	102.2	105.4	3	13
278	Fertilisers	105.5	99.5	97.3	101.2	100.1	99.0	94.5	101.7	105.1	97.1	111.8	15	18
279	Other chemical industries	102.1	108.6	117.4	117.5	108.5	109.6	108.3	108.5	107.6	110.6	108.7	−2	—
Order V	Chemical and allied industries	102.1	108.1	121.2	127.7	115.8	118.8	112.9	112.3	119.2	123.2	126.0	2	12
	Total manufacturing industry	99.6	102.4	110.8	108.1	101.4	105.9	100.4	99.5	100.0	101.5	103.3	2	3

TABLE 2 Sales of principal products

£ million, 1970 prices, not seasonally adjusted

MLH		1970	1971	1972	1973	1974	1975	1975 1st qtr.	1975 2nd qtr.	1975 3rd qtr.	1975 4th qtr.	1976 1st qtr. p
271	General chemicals	1,194	1,203	1,254	1,433	1,629	1,374	369	327	317	361	387
271/1	Inorganic chemicals	378	382	375	413	434	361	103	88	82	88	96
271/2	Organic chemicals	462	475	533	635	765	630	163	147	144	176	186
271/3	Other chemicals	354	346	346	385	430	383	103	92	91	97	105
272	Pharmaceutical chemicals and preparations	436	466	504	595	636	647	168	168	146	165	168
273	Toilet preparations	162	171	183	204	225	216	49	51	59	57	49
274	Paint	188	194	207	227	217	214	52	58	54	50	55
275	Soap and detergents	221	219	227	234	255	243	61	61	58	63	63
276	Synthetic resins and plastics materials and synthetic rubber	539	540	592	675	636	536	129	132	125	150	163
277	Dyestuffs and pigments	141	137	150	158	167	139	38	34	32	35	39
278	Fertilisers	162	171	161	158	164	162	41	40	43	38	41
279	Other chemical industries	405	413	436	480	484	446	120	118	100	108	121
Order V	Chemical and allied industries	3,448	3,514	3,714	4,164	4,413	3,977	1,027	989	934	1,027	1,086

TABLE 3 Imports of principal products of the chemical industry

£ million cif current prices, not seasonally adjusted

MLH		1970	1971	1972	1973	1974	1975	1975 1st qtr.	1975 2nd qtr.	1975 3rd qtr.	1975 4th qtr.	1976 1st qtr.	1976 2nd qtr.
271	General chemicals	302.9	298.1	337.9	459.5	864.8	810.8	214.7	187.8	191.4	216.9	230.7	263.0
271/1	Inorganic chemicals	70.5	68.3	74.6	96.7	155.6	163.8	42.7	42.8	40.4	37.9	51.3	61.5
271/2	Organic chemicals	160.7	147.3	160.6	236.9	506.3	396.4	116.3	92.3	84.4	103.4	121.8	136.2
271/3	Other chemicals	71.7	82.5	102.7	125.9	202.9	250.6	55.7	52.7	66.6	75.6	57.6	65.3
272	Pharmaceutical chemicals and preparations	38.4	42.2	49.1	74.3	106.5	111.4	26.1	25.0	28.9	31.4	38.5	37.9
273	Toilet preparations	5.1	6.2	9.0	15.1	21.2	25.3	5.9	6.5	6.6	6.3	6.0	6.8
274	Paint	5.3	5.9	7.3	10.0	14.9	14.0	3.2	3.1	3.4	4.3	4.5	5.4
275	Soap and detergents	5.8	9.4	12.6	14.2	25.1	19.4	5.5	4.4	4.3	5.2	5.5	6.4
276/1	Synthetic resins	107.5	112.6	134.6	191.6	336.9	243.3	53.7	56.6	61.6	71.5	90.9	106.4
276/2	Synthetic rubber	18.8	20.5	20.7	27.0	39.1	42.3	11.0	9.3	9.7	12.3	14.0	15.5
277	Dyestuffs and pigments	26.7	35.7	39.2	54.5	71.5	53.2	11.5	12.8	12.9	16.0	17.2	18.0
278	Fertilisers	23.1	25.9	32.9	35.2	57.4	55.3	17.5	13.7	12.1	12.0	17.9	15.9
279	Other chemical industries	36.5	42.3	48.6	65.5	103.2	114.5	28.9	29.9	26.7	29.0	43.6	41.8
Order V	Chemicals and allied industries	570.1	598.8	691.9	946.9	1,640.6	1,489.5	378.0	349.1	357.8	404.7	468.7	517.0

£ million cif 1970 prices, not seasonally adjusted

MLH		1970	1971	1972	1973	1974	1975	1975 1st qtr.	1975 2nd qtr.	1975 3rd qtr.	1975 4th qtr.	1976 1st qtr.	1976 2nd qtr.
271	General chemicals	302	289	328	376	385	366	86	77	82	90	94	97
271/1	Inorganic chemicals	70	65	68	81	82	71	20	17	18	16	20	21
271/2	Organic chemicals	160	147	165	194	191	150	42	35	34	39	49	49
271/3	Other chemicals	72	77	94	101	112	115	25	26	31	34	26	26
272	Pharmaceutical chemicals and preparations	39	39	46	60	72	57	16	13	14	14	17	17
273	Toilet preparations	5	6	9	13	14	18	5	5	4	4	3	4
274	Paint	5	6	7	8	9	8	2	2	2	2	2	3
275	Soap and detergents	6	9	12	12	17	14	4	4	3	3	3	4
276/1	Synthetic resins	108	120	149	187	203	141	31	33	36	41	49	52
276/2	Synthetic rubber	19	23	25	24	22	26	7	6	6	7	8	7
277	Dyestuffs and pigments	27	33	35	43	44	29	6	7	7	8	9	8
278	Fertilisers	23	24	28	26	26	19	6	5	4	4	6	6
279	Other chemical industries	36	41	45	50	59	52	13	14	12	13	20	16
Order V	Chemicals and allied industries	570	591	682	800	852	698	176	165	170	186	211	214

TABLE 4 Exports of principal products of the chemical industry

£ million, fob current prices, not seasonally adjusted

MLH		1970	1971	1972	1973	1974	1975	1975 1st qtr.	1975 2nd qtr.	1975 3rd qtr.	1975 4th qtr.	1976 1st qtr.	1976 2nd qtr.
271	General chemicals	324.2	366.0	373.8	523.6	984.7	917.9	221.7	223.7	217.7	254.8	303.9	363.3
271/1	Inorganic chemicals	61.5	62.7	58.0	81.5	128.1	128.9	38.2	31.8	27.2	31.7	36.5	45.9
271/2	Organic chemicals	135.7	154.4	160.5	244.1	545.3	451.7	108.6	105.0	105.8	132.3	156.3	179.9
271/3	Other chemicals	127.0	148.9	155.3	198.0	311.3	337.3	74.9	86.9	84.7	90.8	110.6	137.5
272	Pharmaceutical chemicals and preparations	134.1	161.1	172.9	212.6	287.1	350.4	80.8	95.8	84.0	89.8	97.7	100.2
273	Toilet preparations	22.4	23.9	28.2	34.4	46.8	57.4	12.9	14.9	14.8	14.8	16.1	20.4
274	Paint	19.8	21.6	23.6	29.3	46.4	55.3	13.5	14.8	12.9	14.1	14.9	17.7
275	Soap and detergents	23.5	23.8	28.8	38.0	70.5	81.0	18.2	21.6	19.4	21.8	21.8	27.3
276/1	Synthetic resins	137.1	147.4	160.3	200.5	330.9	312.6	76.3	75.7	68.9	91.7	103.3	120.0
276/2	Synthetic rubber	19.8	22.2	25.7	34.3	46.6	37.8	8.9	9.4	8.0	11.5	13.1	15.3
277	Dyestuffs and pigments	53.6	58.7	79.2	107.0	162.2	137.3	34.9	32.4	31.5	38.5	37.2	46.5
278	Fertilisers	4.8	3.6	7.0	14.8	45.7	53.4	27.2	15.0	4.7	6.5	18.7	9.7
279	Other chemical industries	109.8	126.8	129.2	158.3	221.9	272.3	67.5	72.5	67.1	65.2	83.5	87.6
Order V	Chemical and allied industries	849.4	955.1	1,028.7	1,352.8	2,242.8	2,275.1	561.7	575.7	529.0	608.7	710.2	808.0

£ million, fob 1970 prices, not seasonally adjusted

MLH		1970	1971	1972	1973	1974	1975	1975 1st qtr.	1975 2nd qtr.	1975 3rd qtr.	1975 4th qtr.	1976 1st qtr.	1976 2nd qtr.
271	General chemicals	324	354	353	461	564	421	103	103	102	113	135	145
271/1	Inorganic chemicals	61	61	53	62	63	51	15	12	11	13	14	17
271/2	Organic chemicals	136	152	156	226	292	205	48	46	51	59	73	71
271/3	Other chemicals	127	141	145	174	209	165	40	44	40	41	49	58
272	Pharmaceutical chemicals and preparations	134	156	164	196	231	232	58	64	55	55	61	61
273	Toilet preparations	22	22	25	28	28	27	7	7	7	7	8	9
274	Paint	20	21	20	23	25	26	6	7	6	6	6	7
275	Soap and detergents	24	22	26	32	42	39	9	10	9	10	10	13
276/1	Synthetic resins	137	150	167	180	188	161	38	38	36	49	53	58
276/2	Synthetic rubber	20	21	24	28	30	17	4	4	4	5	6	6
277	Dyestuffs and pigments	54	55	69	82	89	64	16	15	15	17	16	18
278	Fertilisers	5	4	7	13	24	26	14	7	2	2	6	3
279	Other chemical industries	110	130	138	149	163	151	41	41	36	34	41	42
Order V	Chemical and allied industries	849	935	994	1,192	1,384	1,164	296	297	272	299	342	363

been some slippage in actual expenditure on investment because of increased demands for working capital.

Employment

The decline in employment which began about 18 months ago now seems to have ended; most chemical industries showed a slight rise in the number of employees employed in the second quarter. It is however as yet too early to discern signs of recruitment on any significant scale.

Notes

Revisions: Table 1 has been revised to take account of the results of the quarterly sales inquiries for the first quarter of 1976 and revisions to the seasonal adjustment factors. Tables 2 and 8 include changes made in the light of the provisional results of the 1974 annual census of production, and table 7 has been revised to take account of information derived from the mid-1975 census of employment.

Inquiries: Write or telephone Mr G. Fogg, Dean Bradley House, 52 Horseferry Road, London SW1 (tel. 01-212 6937).

TABLE 8 Capital expenditure

£ million

	Current prices not seasonally adjusted	1970 prices, seasonally adjusted
1963	127.8	172.7
1964	162.2	214.8
1965	217.4	274.0
1966	254.3	304.8
1967	214.7	256.1
1968	223.1	256.0
1969	267.6	296.4
1970	382.3	382.3
1971	367.1	333.9
1972	281.1	240.0
1973	249.5	192.4
1974	352.7	223.1
1975	547.0	270.5
1975 1st quarter	120.4	68.2
2nd quarter	135.8	70.0
3rd quarter	138.3	69.3
4th quarter	152.5	63.0
1976 1st quarter	131.4	59.9
2nd quarter	152.5	67.1

TABLE 5 Price index numbers of output (home sales)

1970 = 100

MLH		1971	1972	1973	1974	1975	1975 1st qtr	1975 2nd qtr	1975 3rd qtr	1975 4th qtr	1976 1st qtr	1976 2nd qtr
271	General chemicals	107.0	109.8	114.4	158.4	201.1	182.3	200.3	207.9	213.8	224.2	240.2
271/1	Inorganic chemicals	108.0	112.3	116.8	140.7	197.1	170.1	194.4	207.5	216.2	223.9	234.8
271/2	Organic chemicals	106.3	108.1	112.9	185.7	222.7	210.3	220.8	227.8	231.7	247.4	262.5
272	Pharmaceutical chemicals	110.4	107.7	112.6	137.6	183.1	169.2	178.6	189.4	195.3	187.6	201.0
272	Pharmaceutical preparations	103.6	109.1	112.3	126.9	160.7	145.8	154.3	168.7	174.0	179.7	187.6
273	Toilet preparations	108.3	118.6	124.3	136.8	164.5	152.9	159.9	170.6	173.9	182.2	186.5
274	Paint	112.4	120.6	127.5	161.9	203.6	196.0	201.6	205.3	211.5	220.0	222.2
275	Soap and synthetic detergents	103.0	112.3	123.8	162.8	185.1	181.0	182.4	187.9	188.9	200.6	206.2
276/1	Synthetic resins and plastics materials	102.6	103.8	105.6	156.4	181.8	177.0	180.0	181.9	188.3	194.6	205.6
277	Dyestuffs and pigments	111.6	115.7	122.6	141.5	174.0	159.9	168.1	181.8	187.3	198.9	203.2
279	Other chemical industries	108.5	115.1	120.6	145.9	187.1	172.5	180.6	192.9	202.5	208.4	212.1
Order V	Chemicals and allied industries*	108.2	113.7	118.9	152.8	188.7	177.4	186.2	192.8	198.2	206.5	213.7
	Total manufacturing industry	109.0	114.8	123.2	152.1	188.7	176.0	186.3	193.4	199.1	206.9	214.4

* This index refers only to sales outside the chemical industry, including sectors not shown above.

TABLE 6 Price index numbers of materials and fuel purchased

1970 = 100

		1971	1972	1973	1974	1975	1975 1st qtr	1975 2nd qtr	1975 3rd qtr	1975 4th qtr	1976 1st qtr	1976 2nd qtr
Order V	Chemical and allied industries	108.8	112.2	135.9	215.4	239.1	230.9	233.5	241.0	250.8	258.7	276.5
	Total manufacturing industry	104.6	109.2	144.5	215.1	235.5	220.9	225.6	239.3	256.1	266.5	292.6

TABLE 7 Employees in employment: Great Britain

Thousands, monthly averages

MLH		Mid-year count 1970	Mid-year count 1971	1972	1973	1974	1975	1975 1st qtr	1975 2nd qtr	1975 3rd qtr	1975 4th qtr	1976 1st qtr	1976 2nd qtr
271	General chemicals	141	143	139	135	134	133	135	132	133	133	132	133
272	Pharmaceutical chemicals and preparations	71	73	74	74	78	77	79	78	77	76	74	74
273	Toilet preparations	22	23	25	27	27	25	27	25	24	23	22	23
274	Paint	31	29	27	27	28	27	27	27	27	27	27	27
275	Soap and synthetic detergents	18	15	15	15	16	17	17	17	18	17	17	17
276	Synthetic resins and plastics materials and synthetic rubber	51	48	46	47	50	50	51	50	50	49	49	50
277	Dyestuffs and pigments	21	20	19	22	24	23	24	23	23	22	22	22
278	Fertilisers	11	11	11	11	12	12	12	12	12	12	12	12
279	Other chemical industries	75	73	69	69	68	67	67	67	67	66	66	67
Order V	Chemical and allied industries	440	435	426	427	436	431	438	430	430	425	421	423
	Total manufacturing industry	8,164	7,886	7,655	7,700	7,719	7,376	7,557	7,390	7,307	7,251	7,150	7,124

Source: *Department of Employment Gazette*: industrial analysis of employees in employment.

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Steel consumption and stocks in the second quarter of 1976

Seasonally adjusted estimates of aggregate consumption, deliveries and stocks of finished steel by type in the second quarter of 1976 are given in table 1, with a detailed analysis of stocks in table 5. Estimates of consumption and stocks, by industry, are given in tables 2, 3 and 4.

Consumption by industry: table 2
The aggregate consumption of steel during the second quarter 1976 at 3.88 million tonnes, fell by slightly more than 4½ per cent compared with the previous quarter. This fall is reflected by most industries except coalmining and motor vehicles, where small increases occurred. Within the railway industry consumption was similar to the first quarter of 1976.

Stocks by industry: table 3
Consumer stock levels continued to fall but at a much lower rate than in the previous four quarters. The largest decreases were within the shipbuilding, mechanical engineering and railway industries; increases were estimated for the motor, hollowware and the residual groups of other consuming industries. Aggregate consumer stocks are estimated to be the lowest since the third quarter 1973. Steel stockholders stocks were estimated to have risen by 4 per cent during the second quarter, the first such increase since the peak level of first quarter 1975.

Ratio of stocks to weekly consumption by industry: table 4
Only minor changes occurred to these ratios during the second quarter. Industries with the largest ratio were, shipbuilding, construction and coalmining at 38, 22 and 20 weeks, respectively.

Hollowware, electrical engineering and wire and wire manufactures showed the lowest ratios at 7, 7 and 9 weeks, respectively.

Stocks by product: table 5
Total stocks by product compared with stock held at the end of the first quarter of 1975 indicated that sheet decreased by 19 per cent, plate by 9 per cent, tinplate by 15 per cent, rods and bars for reinforcement by 9 per cent, and other steel products by 10 per cent.

Inquiries: 01-212 5544.

TABLE 1 Consumption, deliveries and stocks of finished steel

Seasonally adjusted

	Consumption m. tonnes	Deliveries m. tonnes			Stocks at end of period m. tonnes			Ratio of stocks to weekly consumption (b)		
		From UK production to consumers and stockholders	Imports	Total to consumers (a)	Consumers	Stockholders	Total	Consumers	Stockholders	Total
1969	17.78	17.14	1.18	18.28	3.77	0.63	4.40	10.8	1.9	12.7
1970	17.64	17.10	1.04	17.91	4.15	0.87	5.02	11.9	2.5	14.4
1971	16.72	14.50	1.41	16.07	3.47	0.71	4.18	11.5	2.3	13.8
1972	16.75	14.59	2.14	16.72	3.44	0.72	4.16	9.6	2.0	11.6
1973	18.45	16.80	2.51	19.45	4.44	0.58	5.02	13.2	1.8	15.0
1974	17.58	15.07	3.29	18.07	4.96	0.87	5.83	15.1	2.6	17.7
1975	15.45	12.03	3.03	15.01	4.53	0.92	5.45	14.5	2.9	17.4
1972 2nd quarter	4.04	3.43	0.47	3.88	3.33	0.68	4.01	10.0	2.2	12.2
3rd quarter	4.28	3.78	0.53	4.32	3.32	0.73	4.05	9.6	2.1	11.7
4th quarter	4.50	3.96	0.66	4.62	3.44	0.72	4.16	9.6	2.0	11.6
1973 1st quarter	4.67	4.15	0.65	4.80	3.57	0.73	4.30	10.6	2.2	12.8
2nd quarter	4.37	4.13	0.44	4.61	3.82	0.68	4.50	10.8	1.9	12.7
3rd quarter	4.60	4.26	0.61	4.91	4.12	0.64	4.76	11.1	1.8	12.9
4th quarter	4.81	4.26	0.81	5.13	4.44	0.58	5.02	13.2	1.8	15.0
1974 1st quarter	4.36	3.98	0.97	4.92	5.00	0.62	5.62	14.2	1.8	16.0
2nd quarter	4 59	3.93	0.82	4.62	5.06	0.75	5.81	15.5	2.3	17.8
3rd quarter	4.25	3.56	0.70	4.19	5.00	0.81	5.81	14.8	2.4	17.2
4th quarter	4.38	3.60	0.80	4.34	4.96	0.87	5.83	15.1	2.6	17.7
1975 1st quarter	4.27	3.55	0.85	4.26	4.95	1.01	5.96	17.4	3.6	21.0
2nd quarter	3.70	2.88	0.66	3.56	4.82	0.99	5.81	16.8	3.5	20.3
3rd quarter	3.71	2.76	0.74	3.56	4.67	0.93	5.60	16.1	3.2	19.3
4th quarter	3.77	2.84	0.78	3.63	4.53	0.92	5.45	14.5	2.9	17.4
1976 1st quarter	4.07	3.05	0.84	3.90	4.37	0.90	5.27	14.6	3.0	17.6
2nd quarter	3.88	3.18	0.12	3.86	4.35	0.94	5.29	14.6	3.1	17.7

(a) Total deliveries to consumers are deliveries from UK production to consumers and steel stockholders plus imports minus stock build by steel stockholders.
(b) Calculated as stocks divided by weekly consumption in the following quarter, with the exception of the latest quarter when the divisor is weekly consumption in that quarter.

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TABLE 2 Consumption of finished steel by industry group

Seasonally adjusted — million tonnes

	Coalmining	Railways	Shipbuilding	Construction	Engineering: Electrical	Engineering: Mechanical	Motors	Hollow-ware	Wire and wire manufactures	Other consuming industries
1969	0.45	0.39	0.68	2.81	0.78	3.89	2.38	1.12	1.23	4.05
1970	0.44	0.40	0.68	2.86	0.77	3.83	2.32	1.12	1.25	3.97
1971	0.52	0.37	0.69	3.13	0.74	3.06	2.30	1.23	1.12	3.56
1972	0.47	0.37	0.72	2.99	0.76	3.18	2.21	1.23	1.14	3.68
1973	0.52	0.37	0.65	3.35	0.87	3.73	2.43	1.35	1.23	3.95
1974	0.50	0.48	0.58	3.08	1.07	3.54	2.13	1.33	1.12	3.75
1975	0.52	0.54	0.66	2.53	0.84	3.29	1.65	1.09	0.96	3.37
1972 2nd quarter	0.13	0.09	0.19	0.71	0.19	0.76	0.53	0.28	0.28	0.88
3rd quarter	0.12	0.11	0.18	0.76	0.20	0.80	0.55	0.30	0.30	0.96
4th quarter	0.14	0.09	0.19	0.79	0.19	0.86	0.61	0.34	0.29	1.00
1973 1st quarter	0.13	0.09	0.20	0.83	0.21	0.93	0.60	0.32	0.34	1.02
2nd quarter	0.13	0.09	0.14	0.74	0.21	0.89	0.58	0.34	0.30	0.95
3rd quarter	0.13	0.09	0.15	0.86	0.23	0.95	0.63	0.33	0.29	0.94
4th quarter	0.13	0.10	0.16	0.92	0.22	0.96	0.62	0.36	0.30	1.04
1974 1st quarter	0.09	0.11	0.15	0.89	0.25	0.86	0.50	0.33	0.28	0.90
2nd quarter	0.12	0.12	0.13	0.81	0.28	0.93	0.56	0.37	0.27	1.00
3rd quarter	0.15	0.12	0.15	0.66	0.28	0.86	0.56	0.30	0.29	0.88
4th quarter	0.14	0.13	0.15	0.72	0.26	0.89	0.51	0.33	0.28	0.97
1975 1st quarter	0.14	0.15	0.18	0.71	0.22	0.92	0.48	0.30	0.27	0.90
2nd quarter	0.12	0.12	0.18	0.65	0.18	0.79	0.37	0.24	0.22	0.82
3rd quarter	0.12	0.14	0.14	0.59	0.22	0.80	0.36	0.28	0.24	0.82
4th quarter	0.14	0.13	0.16	0.58	0.22	0.78	0.44	0.27	0.23	0.83
1976 1st quarter	0.12	0.12	0.18	0.74	0.22	0.81	0.44	0.30	0.25	0.89
2nd quarter	0.14	0.13	0.14	0.64	0.22	0.80	0.46	0.30	0.24	0.81

TABLE 3 Stocks of finished steel by industry group

Seasonally adjusted — million tonnes

	Coalmining	Railways	Shipbuilding	Construction	Engineering: Electrical	Engineering: Mechanical	Motors	Hollow-ware	Wire and wire manufactures	Other consuming industries
1969	0.11	0.10	0.28	0.88	0.12	0.86	0.43	0.18	0.10	0.71
1970	0.11	0.12	0.29	1.06	0.14	0.93	0.46	0.16	0.14	0.74
1971	0.13	0.11	0.25	0.84	0.10	0.78	0.37	0.14	0.13	0.62
1972	0.09	0.08	0.27	0.83	0.10	0.80	0.38	0.14	0.12	0.63
1973	0.14	0.09	0.34	1.11	0.15	0.92	0.50	0.19	0.14	0.86
1974	0.19	0.14	0.45	1.22	0.17	1.05	0.46	0.20	0.15	0.93
1975	0.22	0.16	0.51	1.14	0.13	0.90	0.39	0.14	0.15	0.79
1972 2nd quarter	0.10	0.10	0.25	0.80	0.10	0.76	0.35	0.15	0.13	0.59
3rd quarter	0.09	0.08	0.25	0.80	0.10	0.78	0.34	0.14	0.12	0.62
4th quarter	0.09	0.08	0.27	0.83	0.10	0.80	0.38	0.14	0.12	0.63
1973 1st quarter	0.11	0.09	0.26	0.87	0.11	0.82	0.40	0.15	0.11	0.65
2nd quarter	0.11	0.09	0.27	0.95	0.12	0.84	0.44	0.16	0.13	0.71
3rd quarter	0.12	0.09	0.31	1.05	0.14	0.85	0.46	0.19	0.13	0.78
4th quarter	0.14	0.09	0.34	1.11	0.15	0.92	0.50	0.19	0.14	0.86
1974 1st quarter	0.18	0.12	0.37	1.18	0.21	1.04	0.55	0.22	0.16	0.97
2nd quarter	0.20	0.13	0.42	1.23	0.20	1.07	0.49	0.19	0.17	0.96
3rd quarter	0.20	0.13	0.45	1.22	0.19	1.05	0.47	0.19	0.16	0.94
4th quarter	0.19	0.14	0.45	1.22	0.17	1.05	0.46	0.20	0.15	0.93
1975 1st quarter	0.20	0.13	0.48	1.22	0.16	1.04	0.43	0.20	0.15	0.94
2nd quarter	0.21	0.15	0.51	1.21	0.15	1.00	0.41	0.18	0.13	0.87
3rd quarter	0.22	0.16	0.52	1.20	0.13	0.93	0.41	0.14	0.14	0.82
4th quarter	0.22	0.16	0.51	1.14	0.13	0.90	0.39	0.14	0.15	0.79
1976 1st quarter	0.22	0.17	0.46	1.05	0.13	0.89	0.39	0.14	0.15	0.77
2nd quarter	0.21	0.15	0.42	1.06	0.12	0.86	0.41	0.16	0.16	0.80

Index of retail sales in Northern Ireland in July

The seasonally adjusted index of the value of retail sales in Northern Ireland for July was 246 (1965 = 100), 16 per cent more than in July 1975.

After allowing for price changes, the total volume of sales in July increased by about 6 per cent compared with the corresponding period last year.

The seasonally adjusted index numbers of the value of sales in July and the percentage increases on a year earlier for the main groups of traders are shown below. More detailed information can be obtained from the Department of Commerce, Index of Retail Sales, 21 Linenhall Street, Belfast BT2 8BZ (tel. Belfast (0232) 28081, ext. 140).

	July 1976		
Sales by:	Sales in 1965 – £m	Seasonally adjusted value index numbers 1965 = 100	Percentage increases
All kinds of business	219	246	16
Food shops	97	250	13
Non-food shops	122	242	19
Of which:			
Clothing and footwear shops	36	219	11
Durable goods shops	21	269	25
Miscellaneous non-food shops	43	275	21
Department and general stores	22	200	21

TABLE 4 Ratio of stocks to weekly consumption by industry group

Seasonally adjusted

	Coalmining	Railways	Shipbuilding	Construction	Engineering		Motors	Hollow-ware	Wire and wire manufactures	Other consuming industries
					Electrical	Mechanical				
1969	12	13	21	16	8	11	9	9	4	9
1970	10	16	22	16	9	14	10	6	6	10
1971	23	17	21	15	8	13	9	6	6	9
1972	9	11	18	13	6	11	8	6	5	8
1973	22	11	29	16	8	14	13	8	7	13
1974	17	14	38	22	9	15	12	8	7	12
1975	23	17	37	20	8	14	12	6	8	12
1972 2nd quarter	10	12	18	14	6	12	8	6	6	8
3rd quarter	9	12	17	13	6	12	7	5	6	8
4th quarter	9	11	18	13	6	11	8	6	5	8
1973 1st quarter	11	14	24	15	7	12	9	6	5	9
2nd quarter	11	14	23	14	7	12	9	7	6	10
3rd quarter	12	11	26	15	8	12	10	7	6	10
4th quarter	22	11	29	16	8	14	13	8	7	13
1974 1st quarter	20	12	36	19	10	15	13	8	8	13
2nd quarter	17	14	37	24	9	16	11	8	8	14
3rd quarter	18	13	38	22	10	15	12	8	7	13
4th quarter	17	12	34	22	10	15	12	9	7	14
1975 1st quarter	21	14	35	25	11	17	15	11	9	15
2nd quarter	22	14	48	26	9	16	15	8	7	14
3rd quarter	21	16	42	27	8	16	12	7	8	13
4th quarter	23	17	37	20	8	14	12	6	8	12
1976 1st quarter	21	17	41	21	7	14	11	6	8	12
2nd quarter	20	15	38	22	7	14	12	7	9	13

See note Table 1 (b).

TABLE 5 Stocks of finished steel held by consumers and stockholders

Seasonally adjusted

million tonnes

	Sheets	Plates	Tinplate	Rods and bars for reinforcement	Other steel products	Total all products
CONSUMERS						
1972	0.42	0.70	0.14	0.15	2.03	3.44
1973	0.60	0.91	0.16	0.22	2.55	4.44
1974	0.61	1.07	0.17	0.23	2.88	4.96
1975	0.41	1.05	0.12	0.23	2.72	4.53
1974 2nd quarter	0.66	1.08	0.17	0.25	2.91	5.07
3rd quarter	0.62	1.07	0.17	0.21	2.93	5.00
4th quarter	0.61	1.07	0.17	0.23	2.88	4.96
1975 1st quarter	0.55	1.09	0.19	0.23	2.89	4.95
2nd quarter	0.49	1.10	0.15	0.25	2.83	4.82
3rd quarter	0.43	1.12	0.14	0.22	2.76	4.67
4th quarter	0.41	1.05	0.12	0.23	2.72	4.53
1976 1st quarter	0.41	0.96	0.15	0.23	2.62	4.37
2nd quarter	0.46	0.93	0.16	0.21	2.59	4.35
STOCKHOLDERS						
1972	0.20	0.12	0.02	0.01	0.37	0.72
1973	0.15	0.11	0.02	0.01	0.29	0.58
1974	0.27	0.18	0.01	0.01	0.40	0.87
1975	0.23	0.24	0.01	0	0.44	0.92
1974 2nd quarter	0.25	0.14	0.02	0.01	0.33	0.75
3rd quarter	0 27	0.16	0.01	0.01	0.36	0.81
4th quarter	0.27	0.18	0.01	0.01	0.40	0.87
1975 1st quarter	0.30	0.23	0.01	0	0.47	1.01
2nd quarter	0.27	0.25	0.01	0	0.46	0.99
3rd quarter	0.24	0.24	0.01	0	0.44	0.93
4th quarter	0.23	0.24	0.01	0	0.44	0.92
1976 1st quarter	0.23	0.25	0.01	0	0.41	0.90
2nd quarter	0.23	0.27	0.01	0	0.43	0.94
TOTAL						
1972	0.62	0.82	0.16	0.16	2.40	4.16
1973	0.75	1.02	0.18	0.23	2.84	5.02
1974	0.88	1.25	0.18	0.24	3.28	5.83
1975	0.64	1.29	0.13	0.23	3.16	5.45
1974 2nd quarter	0.91	1.22	0.19	0.26	3.24	5.82
3rd quarter	0.89	1.23	0.18	0.22	3.29	5.81
4th quarter	0.88	1.25	0.18	0.24	3.28	5.83
1975 1st quarter	0.85	1.32	0.20	0.23	3.36	5.96
2nd quarter	0.76	1.35	0.16	0.25	3.29	5.81
3rd quarter	0.67	1.36	0.15	0.22	3.20	5.60
4th quarter	0.64	1.29	0.13	0.23	3.16	5.45
1976 1st quarter	0.64	1.21	0.16	0.23	3.03	5.27
2nd quarter	0.69	1.20	0.17	0.21	3.02	5.29

Capital expenditure of the manufacturing, distributive and service industries in the second quarter of 1976

Manufacturing industry

Capital expenditure by manufacturing industry in the second quarter of 1976 is now estimated to have been £411 million, at 1970 prices, seasonally adjusted, £9 million more than the provisional estimate, and 2 per cent above the first quarter level.

In the first half of 1976, total expenditure was about 1 per cent less than in the second half of 1975, following a 10 per cent fall between the two halves of 1975. This represents a substantial improvement in the trend of capital spending in total manufacturing; in the industry classification, most industry groups are showing a much slower rate of decline, or showing actual growth, although in the textiles, leather and clothing, the paper, printing and publishing and the chemicals industries the improvement is less marked. Expenditure on vehicles by all manufacturing industies was 14 per cent higher in the first two quarters of 1976 than in the previous two quarters, that on plant and machinery was 1 per cent lower, and that on new building work was 8 per cent lower.

Between the first and second quarters of 1976, large increases were recorded by the vehicles and chemicals industries (15 and 12 per cent respectively); the metal manufacturing group showed a 4 per cent rise and the residual 'other manufacturing' group a 3 per cent rise. There were falls of 9 per cent in both the textiles, leather and clothing group and the coal and petroleum products group, but recent quarterly figures for the latter group have been rather erratic, and expenditure by this industry in the first half of 1976 was at about the same level as in the first half of 1975.

Distributive and service industries (excluding shipping)

Additional information from the distributive and service industries (excluding shipping) leads to a revised estimate of £475 million, at 1970 prices, seasonally adjusted, for their capital expenditure in the second quarter of 1976 – much the same as the provisional estimate. Compared with the outcome for the second half of 1975, their total investment in the first half of 1976 was reduced by about 4 per cent; expenditure on new building work was about 4 per cent lower, and on plant and machinery, 9 per cent lower, while investment in vehicles was some 7 per cent higher.

In the classification according to industry groups, investment by the wholesale sector in the first half of 1976 was about 10 per cent higher than in the second half of 1975, and by the retail sector, 4 per cent higher, while expenditure in the residual group declined by some 7 per cent.

Shipping

In this fluctuating series, revised figures confirm that the net capital expenditure of the shipping industry (after allowance for sales of used ships) had fallen to a low level in the second quarter of 1976 – about £32 million, at 1970 prices, seasonally adjusted.

Note

The estimation of changes in the volume of capital expenditure (as distinct from changes at current prices) is subject to greater error when price rises are larger, and this should be borne in mind in using the figures.

Inquiries: 01-215 3175 (Manufacturing); 01-215 3345 (Distributive and Service).

TABLE 1 Fixed capital expenditure at 1970 prices seasonally adjusted of manufacturing, distributive and service industries

£ million

Period	Total	Analysis by industrial sectors: Manufacturing industries	Distributive and service industries (excluding shipping)	Shipping industry	Analysis by type of asset: New building work	Vehicles	Plant and machinery
1966	3,228	1,774	1,334	120	938	556	1,733
1967	3,314	1,738	1,407	170	939	603	1,772
1968	3,703 (3,615)*	1,851 (1,800)*	1,561 (1,554)*	290 (260)*	963	759 (729)*	1,980 (1,922)*
1969	3,893 (3,981)*	1,978 (2,029)*	1,683 (1,690)*	233 (263)*	1,044	728 (758)*	2,120 (2,178)*
1970	4,294	2,130	1,799	364	1,063	859	2,372
1971	4,284	1,991	1,930	364	1,114	832	2,338
1972	4,293	1,739	2,071	482	1,044	1,018	2,230
1973	4,731	1,872	2,362	498	1,118	1,124	2,489
1974	4,690	2,024	2,251	415	1,162	1,019	2,509
1975	4,040	1,737	1,964	339	1,004	769	2,217
1971 1st quarter	1,051	513	467	71	276	185	590
2nd quarter	1,082	499	479	104	276	226	581
3rd quarter	1,094	498	495	101	281	218	595
4th quarter	1,057	480	489	88	281	204	572
1972 1st quarter	1,053	458	487	107	260	230	564
2nd quarter	1,078	429	521	128	262	260	557
3rd quarter	1,058	425	522	111	256	251	551
4th quarter	1,103	427	540	136	266	278	559
1973 1st quarter	1,198	467	578	154	278	307	613
2nd quarter	1,134	449	586	99	278	251	606
3rd quarter	1,171	489	583	99	291	259	620
4th quarter	1,228	467	615	146	271	307	650
1974 1st quarter	1,171	510	591	71	301	226	644
2nd quarter	1,161	502	562	97	288	250	623
3rd quarter	1,177	501	548	128	288	277	613
4th quarter	1,180	511	550	120	285	265	629
1975 1st quarter	1,063	471	497	95	274	224	565
2nd quarter	1,034	444	495	95	259	212	563
3rd quarter	1,002	416	496	90	243	205	554
4th quarter	941	406	476	59	227	179	535
1976 1st quarter	923	402	460	61	227	186	510
2nd quarter	917	411	475	32	219	162	536

The figures given above cover a wide sector of the economy, accounting – after exclusion of dwellings – for some 55 per cent of all UK gross domestic fixed capital formation in 1974. The scope of manufacturing and the distributive and service industries is defined in the notes at the end of the article, and falls very largely in the private sector of the economy, although some public sector elements are included as appropriate (notably the British Steel Corporation, in manufacturing industry). Exploration and development work in the North Sea (Order II) is excluded.

* After allowing for expenditure, brought forward into 1968 from 1969 to secure the higher rate of investment grants which ended on 31 December 1968: estimated at £51 million for manufacturing industry, £7 million for distributive and service industries, and £30 million for shipping. The estimate for shipping is particularly uncertain because of the erratic nature of this industry's capital expenditure, while that for the distributive and service industries is uncertain because of the smallness of the effect.

TABLE 2 Fixed capital expenditure of manufacturing industry at 1970 prices seasonally adjusted

£ million

Period	Total all manufacturing industries	Analysis by industry group: Food, drink and tobacco	Coal and petroleum products	Chemicals	Metal manufacture	Engineering shipbuilding and metal goods	Vehicles	Textiles leather and clothing	Paper printing and publishing	Other manufacturing industries	Analysis by type of asset: New building work	Vehicles	Plant and machinery
1966	1,773.7	203.3	78.1	304.8	151.5	361.6	193.2	164.3	111.1	205.8	363.4	98.3	1,312.0
1967	1,737.7	236.5	123.7	256.1	155.4	353.2	194.6	133.0	109.0	176.2	319.6	99.5	1,318.6
1968	1,851.2 (1,800.2)*	247.1	127.7	256.0	145.8	392.2	172.2	176.7	112.2	221.3	335.9	109.2	1,406.1 (1,355.1)*
1969	1,977.5 (2,028.5)*	238.8	102.9	296.4	167.9	394.0	208.7	189.4	121.3	258.1	390.1	115.9	1,471.5 (1,522.5)*
1970	2,129.8	246.4	82.8	382.3	256.4	422.3	233.4	170.9	134.2	201.1	391.2	114.7	1,623.9
1971	1,990.7	248.6	118.5	333.9	296.3	373.3	149.2	144.4	110.8	215.7	357.1	113.4	1,520.2
1972	1,739.2	258.7	100.8	240.0	255.3	343.8	98.8	120.0	101.8	220.0	305.5	123.3	1,310.4
1973	1,871.7	290.1	39.8	192.4	213.9	428.4	143.8	178.5	124.0	260.8	330.8	133.0	1,407.9
1974	2,024.0	294.8	44.9	223.1	250.5	479.4	158.3	190.3	131.6	251.1	361.4	138.2	1,524.4
1975	1,737.2	223.9	52.8	270.5	281.0	379.4	125.9	126.7	102.7	174.3	307.3	104.5	1,325.4
1971 1st quarter	513.4	62.8	26.0	88.4	72.7	103.1	40.3	41.0	27.9	51.2	90.9	27.9	394.6
2nd quarter	499.0	61.0	26.7	78.7	71.3	96.4	40.7	39.5	29.4	55.3	90.0	29.0	380.0
3rd quarter	497.9	62.7	31.6	84.9	77.4	89.8	36.5	32.2	27.3	55.5	87.2	27.2	383.5
4th quarter	480.4	62.1	34.2	81.9	74.9	84.0	31.7	31.7	26.2	53.7	89.0	29.3	362.1
1972 1st quarter	458.1	60.0	30.8	69.0	84.1	82.1	26.2	26.3	22.1	57.5	79.8	28.2	350.1
2nd quarter	429.1	62.4	27.2	62.8	62.4	81.0	23.2	30.2	25.7	54.2	77.8	29.6	321.7
3rd quarter	424.8	67.8	22.2	57.5	53.6	88.5	23.5	30.3	26.7	54.7	76.3	31.9	316.6
4th quarter	427.2	68.5	20.6	50.7	55.2	92.2	25.9	33.2	27.3	53.6	71.6	33.6	322.0
1973 1st quarter	466.8	76.3	17.9	49.8	59.4	99.0	32.8	40.9	31.4	59.3	76.7	34.0	356.1
2nd quarter	448.9	64.8	18.1	49.3	40.7	106.4	34.0	40.5	30.8	64.3	78.2	31.9	338.8
3rd quarter	488.6	73.0	13.9	46.8	59.6	110.1	38.0	48.2	30.8	68.2	89.2	33.7	365.7
4th quarter	467.4	76.0	−10.1	46.5	54.2	112.9	39.0	48.9	31.0	69.0	86.7	33.4	347.3
1974 1st quarter	509.9	78.9	9.9	49.7	55.4	124.4	40.7	49.7	31.0	70.2	91.4	34.5	384.0
2nd quarter	502.2	76.0	9.8	51.5	60.8	117.6	39.8	48.6	34.1	64.0	89.4	35.3	377.5
3rd quarter	501.2	73.4	11.2	56.0	58.7	119.4	40.2	48.2	33.0	61.1	87.9	35.3	378.0
4th quarter	510.7	66.5	14.0	65.9	75.6	118.0	37.6	43.8	33.5	55.8	92.7	33.1	384.9
1975 1st quarter	471.2	63.2	12.8	68.2	69.8	106.5	35.3	36.7	29.0	49.7	87.4	28.5	355.3
2nd quarter	444.4	57.5	14.3	70.0	67.7	99.3	32.2	32.4	25.6	45.4	80.2	25.3	338.9
3rd quarter	416.1	49.7	14.7	69.3	70.9	89.4	28.6	29.0	25.4	39.1	72.7	24.9	318.5
4th quarter	405.5	53.5	11.0	63.0	72.6	84.2	29.8	28.6	22.7	40.1	67.0	25.8	312.7
1976 1st quarter	401.8	51.7	14.3	59.9	77.0	85.5	27.3	26.0	22.4	37.7	66.5	26.7	308.6
2nd quarter	410.7	49.8	13.0	67.1	80.0	85.0	31.3	23.7	22.0	38.8	62.1	31.0	317.6

TABLE 3 Fixed capital expenditure in the distributive and service industries (excluding shipping) at 1970 prices seasonally adjusted

£ million

Period	Total	Analysis by industry group: Wholesale distribution	Retail distribution	Other industries	Analysis by type of asset: New building work	Vehicles	Plant and machinery
1966	1,334	147	231	956	570	342	421
1967	1,407	170	225	1,012	616	338	453
1968	1,561 (1,554)*	166	283	1,112 (1,105)*	624	368	570 (563)*
1969	1,683 (1,690)*	160	295	1,228 (1,235)*	650	389	643 (650)*
1970	1,799	176	299	1,325	666	394	739
1971	1,930	185	334	1,411	754	367	809
1972	2,071	198	400	1,473	736	436	899
1973	2,362	197	460	1,705	786	503	1,073
1974	2,251	174	432	1,645	798	472	981
1975	1,964	130	404	1,403	694	381	888
1971 1st quarter	467	44	82	341	184	89	195
2nd quarter	479	46	86	346	185	96	198
3rd quarter	495	47	84	363	194	92	209
4th quarter	489	48	81	360	192	89	208
1972 1st quarter	487	49	91	347	178	102	207
2nd quarter	521	50	96	375	184	108	229
3rd quarter	522	46	103	373	180	112	231
4th quarter	540	53	109	378	195	114	232
1973 1st quarter	578	52	110	416	201	123	254
2nd quarter	586	50	118	419	199	120	267
3rd quarter	583	47	119	417	201	130	252
4th quarter	615	48	114	454	184	130	301
1974 1st quarter	591	47	107	438	209	123	259
2nd quarter	562	43	105	414	198	120	245
3rd quarter	548	45	102	401	199	115	234
4th quarter	550	39	118	393	192	114	244
1975 1st quarter	497	35	94	368	186	102	209
2nd quarter	495	34	102	360	179	93	224
3rd quarter	496	31	103	361	170	92	234
4th quarter	476	29	105	341	160	95	222
1976 1st quarter	460	32	107	321	160	100	200
2nd quarter	475	34	110	330	157	101	217

TABLE 4 Fixed capital expenditure at current prices of manufacturing, distributive and service industries

£ million

Period	Total	Manufacturing industry	Distributive and service industries (excluding shipping)	Shipping industry
1966	2,787	1,517	1,172	99
1967	2,861	1,485	1,236	140
1968	3,304	1,639	1,418	247
1969	3,629	1,822	1,589	217
1970	4,294	2,130	1,799	364
1971	4,648	2,187	2,078	384
1972	4,971	2,044	2,373	553
1973	6,092	2,437	3,020	635
1974	7,087	3,145	3,389	611
1975	7,664	3,449	3,653	561
1971 1st quarter	1,076	523	489	65
2nd quarter	1,131	519	504	108
3rd quarter	1,173	560	520	93
4th quarter	1,268	585	566	118
1972 1st quarter	1,160	512	543	105
2nd quarter	1,199	477	583	140
3rd quarter	1,197	504	582	111
4th quarter	1,415	552	666	197
1973 1st quarter	1,455	576	713	166
2nd quarter	1,383	541	724	118
3rd quarter	1,471	635	727	109
4th quarter	1,782	685	856	242
1974 1st quarter	1,619	711	818	90
2nd quarter	1,633	705	802	125
3rd quarter	1,795	795	827	173
4th quarter	2,099	934	943	223
1975 1st quarter	1,841	843	858	141
2nd quarter	1,828	815	875	137
3rd quarter	1,917	852	920	146
4th quarter	2,078	940	1,001	137
1976 1st quarter	1,960	906	944	110
2nd quarter	1,904	890	962	52

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NOTES TO TABLES

Capital expenditure comprises expenditure on vehicles (including ships) and plant and machinery less receipts from sales of these assets, and on new building work.

The analysis by industry group follows the Standard Industrial Classification Revised 1968 edition:

Manufacturing Orders III to XIX
Distributive Trades Order XXIII
Wholesale MLH 810, 811, 812, 831, 832 (except leasing by Finance Houses and similar businesses)
Retail MLH 820, 821
Other Industries Order XX (Construction): XXII (Transport and Communication) excluding 701 – Railways, 706 – Port and Inland Water Transport, 707 – Air Transport and 708 – Postal Services and Telecommunications: XXIV (Insurance, Banking, Finance and Business Services) including leasing by Finance Houses and similar Businesses and excluding Trustee Savings Banks; XXV (Professional and Scientific Services) excluding 872 – Educational Services and 874 – Medical and Dental Services; and XXVI (Miscellaneous Services).

SIC Orders I (Agriculture, Forestry and Fishing), II (Mining and Quarrying), XXI (Gas, Electricity and Water), and XXVI (Public Administration and Defence) are completely excluded.

The estimates with the exception of those for manufacturing industry in Table 2, are shown to the nearest £m but should not be regarded as accurate to this degree and care should be taken in using the industry figures in Tables 2 and 3, because of the margins of error involved in the quarterly seasonal adjustments. Also, there may be an apparent discrepancy between the total and the sum of the constituent parts due to rounding.

Manufacturers' and distributors' stocks in the second quarter of 1976

Manufacturing industry

Revised figures indicate that manufacturers' stocks fell by about £130 million at 1970 prices, seasonally adjusted, in the second quarter of 1976, a slightly greater fall than indicated by provisional figures. The largest reduction was in work in progress but stocks of materials and fuel and finished goods were also reduced.

The chemicals industry group was the only one to show a rise in stocks. There were relatively large falls in the stocks of the engineering, shipbuilding and vehicles and the textiles groups, and minor falls in the other industries.

The stocks/output ratio is now estimated to have been 103.3 at the end of June compared with 105.6 at the end of March.

Distributive industries

Revised estimates confirm that wholesalers' stocks declined by about £20 million, at 1970 prices, seasonally adjusted, in the second quarter of 1976. A small rise in the stocks held by general wholesale distributors was more than offset by reductions in the figures for dealers in coal, builders' materials, etc, and dealers in industrial materials and machinery. Retailers' stocks declined by about £50 million, at 1970 prices, seasonally adjusted, in the second quarter.

Note. The estimation of physical change in stock is subject to greater error when price increases are larger, and this should be borne in mind in using the figures.

Inquiries: 01-215 5215 (Manufacturing); 01-215 3345 (Distributive and Service).

TABLE 1 Value of physical increase of manufacturers' and distributors' stocks at 1970 prices seasonally adjusted

£ million

	Total	Manufacturing	Wholesaling	Retailing
Level of stocks at end 1975	14,182	10,399	1,807	1,976
1970	379	325	68	−14
1971	−74	−148	52	22
1972	−82	−145	48	15
1973	888	404	102	382
1974	636	666	81	−111
1975	−526	−392	−111	−23
1971 1st quarter	24	26	14	−16
2nd quarter	−62	−95	26	7
3rd quarter	−26	−49	9	14
4th quarter	−10	−30	3	17
1972 1st quarter	−44	−62	17	1
2nd quarter	−29	−70	1	40
3rd quarter	−43	−36	6	−13
4th quarter	34	23	24	−13
1973 1st quarter	292	172	37	82
2nd quarter	307	99	3	205
3rd quarter	119	42	29	48
4th quarter	170	91	32	47
1974 1st quarter	−41	−21	18	−38
2nd quarter	259	197	43	19
3rd quarter	322	358	3	−39
4th quarter	96	133	17	−53
1975 1st quarter	−52	18	−31	−38
2nd quarter	−226	−105	−54	−66
3rd quarter	−225	−234	−29	38
4th quarter	−23	−70	4	43
1976 1st quarter	66	31	23	12
2nd quarter r	−207	−130	−22	−55

TABLE 2 Value of the physical increase of stocks held by manufacturing industry at 1970 prices seasonally adjusted

£ million

	Analysis by industry group							Analysis by type of asset		
	All manufacturing industries	Food, drink and tobacco	Chemicals, coal and petroleum products	Metal manufacture	Engineering, shipbuilding, vehicles and metal goods	Textiles, leather and clothing	Other manufacturing industries	Materials and fuel	Work in progress	Finished goods
Level of stocks at end 1975	10,399	1,324	1,097	829	5,228	876	1,045	3,546	4,028	2,826
1970	325	11	43	50	222	1	−1	113	122	90
1971	−148	11	17	5	−164	−14	−3	−146	−98	96
1972	−145	20	3	−44	−85	−53	15	−41	32	−136
1973	404	72	80	−13	230	13	23	244	252	−92
1974	666	75	172	26	270	46	78	276	107	283
1975	−392	−99	−40	39	−120	−40	−132	−380	−112	99
1971 1st quarter	26	8	−5	34	−26	9	6	−21	−22	69
2nd quarter	−95	−5	16	−27	−43	−32	−4	−45	−63	13
3rd quarter	−49	−12	−2	−8	−27	5	−5	−42	−8	1
4th quarter	−30	21	9	6	−69	4	−1	−37	−5	13
1972 1st quarter	−62	8	15	−50	−11	−13	−11	−13	12	−61
2nd quarter	−70	16	−21	5	−67	−13	10	−53	20	−38
3rd quarter	−36	−8	6	−4	−15	−17	2	3	−7	−32
4th quarter	23	4	3	5	8	−11	13	22	7	−5
1973 1st quarter	172	3	19	29	85	−5	42	73	100	−1
2nd quarter	99	24	31	−4	53	6	−12	74	51	−27
3rd quarter	42	24	16	−15	21	3	−7	31	59	−48
4th quarter	91	20	15	−24	71	9	−	66	43	−17
1974 1st quarter	−21	22	44	−50	−19	−1	−18	66	−7	−80
2nd quarter	197	27	39	1	55	30	46	61	21	115
3rd quarter	358	42	74	39	136	24	42	135	73	150
4th quarter	133	−16	15	36	98	−7	7	14	21	98
1975 1st quarter	18	−12	−5	55	7	−1	−26	−129	29	118
2nd quarter	−105	−54	−22	15	15	−22	−37	−59	−31	−16
3rd quarter	−234	−28	−32	−26	−86	−16	−46	−133	−72	−29
4th quarter	−70	−4	19	−5	−56	−2	−22	−58	−38	26
1976 1st quarter	31	−34	24	−7	38	10	−1	−43	37	37
2nd quarter r	−130	−11	13	−9	−87	−23	−11	−34	−77	−19

TABLE 3 Value of the physical increase of stocks held by wholesalers at 1970 prices seasonally adjusted £ million

	Total wholesalers	General wholesale distributors	Dealers in coal, builders materials, etc.	Dealers in industrial materials and machinery
Level of stocks at end 1975	1,807	1,040	147	620
1970	68	15	—	53
1971	52	41	−3	14
1972	48	41	11	−3
1973	102	127	−1	−24
1974	81	6	—	75
1975	−111	−142	−13	44
1971 1st quarter	14	3	1	11
2nd quarter	26	20	1	5
3rd quarter	9	12	—	−3
4th quarter	3	6	−4	2
1972 1st quarter	17	2	1	14
2nd quarter	1	4	2	−5
3rd quarter	6	22	2	−18
4th quarter	24	13	7	5
1973 1st quarter	37	37	−1	1
2nd quarter	3	13	3	−13
3rd quarter	29	41	1	−13
4th quarter	32	36	−4	—
1974 1st quarter	18	19	6	−7
2nd quarter	43	21	1	22
3rd quarter	3	−22	−4	29
4th quarter	17	−12	−2	31
1975 1st quarter	−31	−52	12	9
2nd quarter	−54	−52	−11	9
3rd quarter	−29	−26	−6	4
4th quarter	4	−12	−7	23
1976 1st quarter	23	10	20	−7
2nd quarter r	−22	11	−10	−23

TABLE 4 Increase in the book value of manufacturers' and distributors' stocks

£ million

	Total	Manufacturing	Wholesaling	Retailing
Level of stocks at end 1975	28,340	21,287	3,629	3,423
1970	1,305	1,038	162	105
1971	768	471	160	137
1972	950	618	217	115
1973	3,408	2,331	593	484
1974	6,299	5,098	779	422
1975	3,302	2,574	212	516
1971 1st quarter	260	211	29	21
2nd quarter	295	180	60	55
3rd quarter	113	28	70	14
4th quarter	100	53	—	47
1972 1st quarter	90	60	5	26
2nd quarter	198	113	25	60
3rd quarter	251	148	106	−3
4th quarter	412	298	82	32
1973 1st quarter	600	426	71	102
2nd quarter	678	494	88	96
3rd quarter	959	604	239	116
4th quarter	1,171	807	194	170
1974 1st quarter	1,756	1,492	204	60
2nd quarter	1,845	1,438	224	183
3rd quarter	1,521	1,249	199	73
4th quarter	1,177	919	152	106
1975 1st quarter	987	927	−16	76
2nd quarter	640	607	−20	53
3rd quarter	553	257	124	172
4th quarter	1,122	783	123	215
1976 1st quarter	1,004	829	119	56
2nd quarter r	1,074	959	124	−9

Book values exclude VAT. Purchase Tax payable on retailer's stock prior to the second quarter of 1973.

Notes relating to Tables 1 to 4

The analysis by industry group follows the Standard Industrial Classification (1968 edition).

Manufacturing Orders III to XIX.

Distributive Trades Order XXII:

Wholesale MLH 810, 811, 812, 831, 832 (except leasing by Finance Houses)

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The estimates are shown to the nearest £ million but should not be regarded as accurate to this degree and care should be taken in using the industry figures in Tables 2 and 3 because of the margin of error involved in quarterly seasonal adjustments. Differences between totals and the sum of constituent parts are due to rounding.

TABLE 5 The relationship of manufacturers' stocks to manufacturing production

	Index numbers – 4th quarter 1969 = 100 Seasonally adjusted				Index numbers – 4th quarter 1969 = 100 Seasonally adjusted		
	Stock levels at 1970 prices	Production (with 1970 net output weight)	Ratio of stocks to production		Stock levels at 1970 prices	Production (with 1970 net output weight)	Ratio of stocks to production
1967 Q1	94	89	105.4	1972 Q1	101	98	103.0
2	94	90	104.6	2	101	102	98.4
3	94	90	104.5	3	100	103	96.9
4	94	92	102.6	4	100	107	94.0
1968 Q1	93	94	98.8	1973 Q1	102	111	92.2
2	94	96	98.4	2	103	111	93.3
3	96	96	99.5	3	104	112	92.7
4	97	97	99.8	4	105	111	93.9
1969 Q1	98	98	100.0	1974 Q1	104	107	97.4
2	99	100	98.7	2	106	110	96.8
3	99	100	99.5	3	110	110	99.8
4	100	100	100.0	4	111	106	105.0
1970 Q1	101	100	101.1	1975 Q1	112	106	104.9
2	102	100	102.0	2	111	100	110.2
3	103	101	101.7	3	108	100	108.4
4	103	101	102.2	4	107	100	107.0
1971 Q1	104	100	104.0	1976 Q1	108	102	105.6
2	103	100	102.3	2	106	103	103.3
3	102	100	101.8				
4	102	99	102.7				

1 The index numbers of the level of stocks relate to the end of each quarter: the index of production refers to production during the quarter.

2 The 1970 index of production has been rebased on the fourth quarter of 1969 for the purpose of this table.

3 The index numbers of the stocks production ratio are calculated from unrounded estimates of the data in the previous two columns.

Manufacturers' stocks in July

It is estimated that manufacturers' stocks fell by about £50 million at 1970 prices, seasonally adjusted, in July. Although there seems to have been some restocking of materials and fuel during the month this has been more than offset by falls in work in progress and stocks of finished goods.

Monthly figures from January 1975 are shown below:

	£ million 1970 prices seasonally adjusted
1975 January	+10
February	+20
March	−10
April	−30
May	−10
June	−70
July	−80
August	−50
September	−100
October	−70
November	−10
December	+10
1976 January	+40
February	No change
March	−10
April	−90
May	+40
June	−70
July	−50

Inquiries: 01-215 3176/5215.

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Sales by wholesale textile houses in July

Sales by wholesale textile houses in July showed a decrease of 8 per cent on a year earlier, compared with no change in May and a decrease of 9 per cent in June.

The value of stocks at the end of July showed an increase of 6 per cent compared with the same period last year.

TABLE 1 Total sales and stocks

Index numbers and *percentage increase compared with a year earlier* 1950 = 100

	Value of home sales		Value of stocks end period	
1966	110	*–3*	..	..
1967	104	*–5*	..	..
1968	108	*4*	..	..
1969	103	*–5*	..	..
1970	107	*4*	..	..
1971	115	*8*	..	..
1972	121	*5*	..	..
1973	134	*11*	..	..
1974	147	*9*	..	..
1975	147	*1*	..	..
1973 1st quarter	120	*18*	184	*12*
2nd quarter	123	*11*	171	*17*
3rd quarter	130	*6*	173	*12*
4th quarter	163	*10*	204	*21*
1974 1st quarter	134	*12*	189	*3*
2nd quarter	131	*7*	202	*18*
3rd quarter	148	*13*	194	*12*
4th quarter	173	*6*	198	*–3*
1975 1st quarter	143	*7*	219	*16*
2nd quarter	135	*3*	197	*–2*
3rd quarter	146	*–1*	193	*–1*
4th quarter	165	*–5*	224	*13*
1976 1st quarter	133	*–8*	234	*7*
2nd quarter	127	*–6*	212	*8*
1975 July	125	*7*	210	*2*
August	126	*–11*	206	*—*
September	186	*1*	193	*–1*
October	193	*–6*	197	*3*
November	150	*–3*	231	*4*
December	153	*–4*	224	*13*
1976 January	86	*–12*	213	*4*
February	138	*–11*	227	*6*
March	174	*–1*	234	*7*
April	136	*–9*	208	*7*
May	128	*—*	217	*2*
June	119	*–9*	212	*8* p
July	115	–8	221	*6*

TABLE 2 Analysis by department

Percentage increase compared with a year earlier

	Sales		Stocks‡
	July '76	Jan.-July '76	July '76
Women's knitted outerwear, blouses and skirts	6	9	19
Women's coats, costumes, furs and raincoats	–7	11	4
Women's underwear	–14	–9	–8
Women's hose and children's socks	1	–11	—
Women's millinery	–34	–9	–13
Haberdashery, ribbons and wool	–13	–6	–16
Children's wear	–1	–1	21
Men's and boys' shirts, pyjamas and outfitting	–3	–2	9
Gloves	52	12	–11
Piece-goods and nets	19	10	58
Household textiles	13	5	30
Floor coverings, furniture and hardware	–12	–12	9
Boots and shoes	—	2	–1
Total†	–8	–7	6

† Including some items not included among the sub-headings.
‡ Values at cost.

Note

These statistics are prepared by Textile Distributor's Association. Inquiries should be addressed to the Secretary, the Textile Distributors' Association, 3 Berners Street, London W1P 4JP (tel. 01-580 2902).

Made-up clothing: orders and deliveries

In the three months ended June 1976, deliveries by the clothing industry were provisionally estimated to have been 1 per cent lower than in the preceding three months while net new orders were 7 per cent higher. Orders-on-hand at the end of June 1976 were 8 per cent higher than the end-March 1976 level. (These comparisons are based on the seasonally adjusted series in the accompanying table.)

In using the index numbers shown in the table, it should be borne in mind that, when price increases are large, the various problems associated with constructing a constant value series become more acute. Because of these difficulties the relative accuracy of the estimates is likely to have been reduced in recent months.

Inquiries: 01-212 0116.

Made-up clothing

Index numbers of total orders and deliveries

	Orders-on-hand (end period)		Net new orders		Deliveries	
	December 1969 = 100		Average 1970 Deliveries = 100		Average 1970 Deliveries = 100	
1968	107		100		97	
1969	100		97		97	
1970	103		102		100	
1971	119		108		104	
1972	125		110		109	
1973	155		123		117	
1974	145		115		114	
1975	143		119		116	
	Actual	Seasonally adjusted	Actual	Seasonally adjusted	Actual	Seasonally adjusted
1974 1st quarter	164	161	111	115	107	108
2nd quarter	171	149	122	113	113	115
3rd quarter	137	143	96	113	115	117
4th quarter	145	145	129	118	122	118
1975 1st quarter	135	139	116	124	116	121
2nd quarter	164	149	131	118	113	111
3rd quarter	132	145	99	117	116	118
4th quarter	143	150	128	117	117	112
1976 1st quarter	124	128	107	110	110	112
2nd quarter p	151	138	129	118	109	111
1974 April	171	163	133	122	115	114
May	182	155	134	109	108	113
June	171	149	100	107	117	118
July	156	149	85	113	112	116
August	143	143	86	112	105	118
September	137	143	116	114	129	116
October	142	140	150	115	141	120
November	152	141	153	122	130	118
December	145	145	85	116	96	115
1975 January	138	137	101	119	103	124
February	134	136	121	123	125	122
March	135	139	124	129	120	119
April	147	146	134	111	117	106
May	166	148	145	119	108	114
June	164	149	115	124	113	114
July	148	148	86	115	112	117
August	135	142	86	111	106	119
September	132	145	126	125	131	118
October	135	140	155	118	135	115
November	145	140	139	110	121	111
December	143	150	91	124	93	111
1976 January p	127	126	92	109	100	120
February p	126	128	113	114	114	111
March p	124	128	115	108	117	105
April p	134	134	131	119	107	106
May p	154	137	153	125	114	121
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Registrations of British, community and foreign films

The following are details of films registered by the Department of Trade under the Films Acts 1960 to 1970, as amended by the European Communities Act 1972, during the week ended Friday, 24 September 1976.

BR/E indicates that the film is a British quota film, EC that the film is a quota film. The date which forms part of the registration number of each is the date on which quota life of the film expires.

Title of film	Registered no	Playing time minutes	Date of registration	Registered in the name of	Maker's name
			BRITISH		
The Bizarre And The Beautiful	BR/E 38776/26/9/81	25	24 September	Fox-Rank Distributors Ltd	New Decade Films Ltd
Movietone News 2468	BR/E 38634/26/9/81	8	24 September	British Movietonews Ltd	British Movietonews Ltd
			FOREIGN		
The Shootist	F 38771	100	20 September	Cinema International Corporation (UK)	Dino de Laurentiis Corporation, California
The Bloody Fists	F 38772	88	20 September	London International Film Distributors Ltd	Excelsior Film Distributors, Hong Kong
Gable and Lombard	F 38773	132	23 September	Cinema International Corporation (UK)	Universal Pictures, California
Echoes Of The Road	F 38774	88	23 September	Brent Walker Film Distributors Ltd	American International Pictures, California
Futureworld	F 38775	107	23 September	Brent Walker Film Distributors Ltd	American International Pictures, California

AMENDMENTS TO THE REGISTER

The playing time of the film 'Dr Syn alias The Scarecrow' (BR/E 29047), registered on 13 December 1963, has been amended to 75 minutes.

The registration number of the film 'The Tenant', registered on 16 August 1976, has been amended to EC 38733/22/8/81 and the maker's name to read Marianne Productions, Paris.

CORRECTION TO THE REGISTER

The registration number of the film 'A Private Enterprise', registered on 24 April 1975, has been corrected to BR/E 38703/26/4/80.

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Balance of payments:	
current account (M)	24 Sept. 1976
trends in invisible transactions	16 Apr. 1976
(*see also* Overseas trade of the UK)	
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Capital expenditure: manufacturing, distributive and service industries (Q)	This week
By regions	13 Aug. 1976
Catering trades turnover (M)	17 Sept. 1976
Census of production (A)	2 Apr. 1976
Chemicals industry activity (Q)	This week
Companies:	
acquisitions and mergers (Q)	13 Aug. 1976
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liquidity (Q)	10 Sept. 1976
new registrations:	
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Film industry	
British Film Fund Agency returns (M)	24 Sept. 1976
cinema admissions and takings (M)	17 Sept. 1976
overseas payments and earnings (A)	20 Aug. 1976
registrations of films (A)	30 Jan. 1976
Food:	
consumption levels (6M)	27 Aug. 1976
household consumption (Q)	2 July 1976
Footwear industry: production, orders and deliveries (M)	27 Aug. 1976
Foreign exchange: official reserves (M)	10 Sept. 1976
Foreign trade: industrial countries' production and trade (Q)	25 June 1976
(*see also* Overseas trade of the UK)	
Hire-purchase business (M)	10 Sept. 1976
Industrial production:	
index numbers (M)	24 Sept. 1976
N. Ireland index	21 Nov. 1975
Scotland	6 Aug. 1976
Wales	30 July 1976
Insolvencies (Q)	6 Aug. 1976
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book values of overseas direct investments (every 3 years)	15 Nov. 1973
industry's investment intentions (3 times a year)	11 June 1976
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deliveries (Q)	3 Sept. 1976
production (M)	3 Sept. 1976
production: quarterly analysis (Q)	3 Sept. 1976
Metal-working machine tools (M)	24 Sept. 1976
Motor industry:	
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direct exporters and credit terms (A)	16 July 1976
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(*see also* Balance of payments)	
Pension funds: investments and assets (A)	20 Aug. 1976
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amendment	13 Aug. 1976
Regional selective assistance monthly summary (M)	20 Aug. 1976
Regional selective assistance: offers £10,000 or more (Q)	27 Aug. 1976
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Retail trades:	
sales (M)	10 Sept. 1976
provisional figures (M)	17 Sept. 1976
sales, N. Ireland (M)	This week
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Steel consumption and stocks (Q)	This week
Stocks:	
manufacturers' and distributors' quarterly figures (Q)	This week
manufacturers' stocks: monthly estimates (M)	This week
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Television: overseas payments and earnings (A)	20 Aug. 1976
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activity in the industry (Q)	30 July 1976
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wool exports (Q)	17 Sept. 1976
wool output (M)	17 Sept. 1976
Tourism:	
foreign visitor arrivals (M)	17 Sept. 1976
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Wholesale prices:	
average prices of selected commodities (A)	9 Apr. 1976
index numbers (M)	24 Sept. 1976

Departmental organisations etc.

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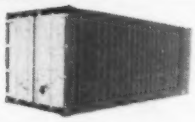

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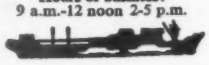

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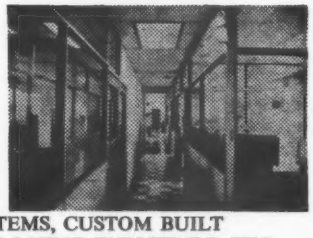

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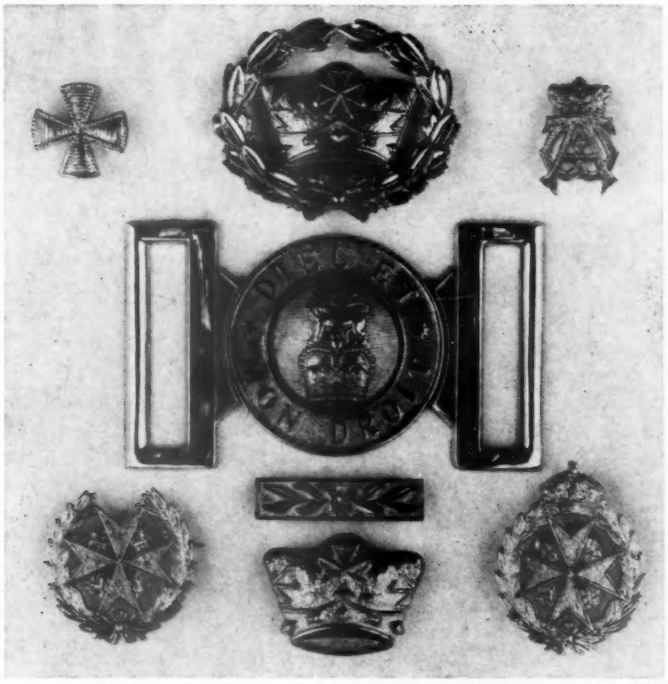

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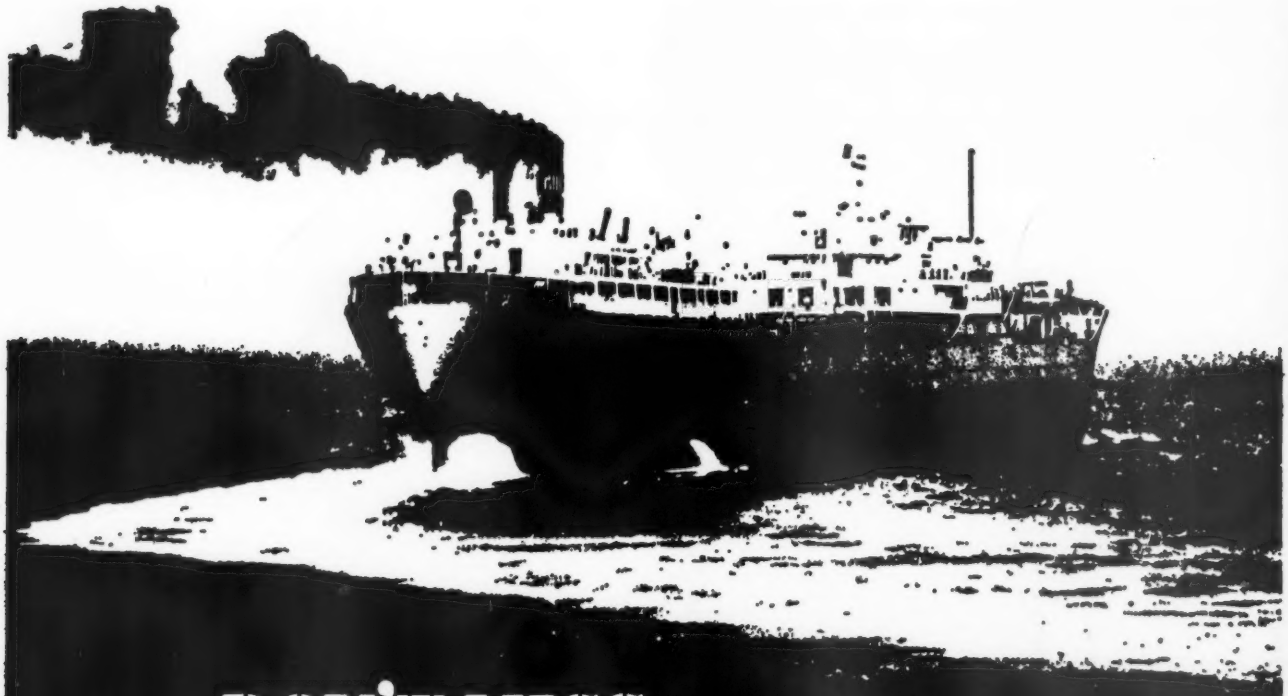

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